Department of Labor—Federal Security Agency Appropriations for 1953

HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

EIGHTY-SECOND CONGRESS

SECOND SESSION

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FEDERAL SECURITY AGENCY

PART 2
(Public Health Service)

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MONDAY, JANUARY 28, 1952.

PUBLIC HEALTH SERVICE

WITNESSES

DR. LEONARD A. SCHEELE, SURGEON GENERAL
DR. W. H. SEBRELL, DIRECTOR, NATIONAL INSTITUTES OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Mr. FOGARTY. The committee will come to order.

The committee has before it this morning the Public Health Service and Dr. Scheele, the Surgeon General. Doctor, do you have a statement for the committee?

GENERAL STATEMENT

Dr. SCHEELE. Yes, sir, Mr. Chairman.

Mr. Chairman and members of the committee: I am very happy to appear before you again as you consider the budget requests of the Public Health Service for the fiscal year 1953. Our bureau, division, and institute chiefs will appear later to discuss the details of our manifold programs.

I should like to give you a few high lights of public health accomplishment. Improvements resulting from increased medical research and health services sometimes show up slowly in vital statistics. They are the end result of long-range programs and action. One can, however, describe many instances in which advances have come almost overnight. I shall mention a few of these before discussing major health problems that lie ahead.

DISASTER AID

In addition to our long-range programs, we frequently find it necessary to deal with immediate, urgent problems. One case in point was the flood in the Kansas City area last summer. When the call for help came, the Public Health Service had 21 trained workers in the flood area within 48 hours. Ultimately, 70 Public Health Service men were in the field. No outbreak of communicable disease due to flood conditions occurred. Only one case of typhoid fever occurred in the area during the flood.

Our prompt action in this instance was made possible by the disaster aid fund which your committee has provided in our annual appropriations for the control of communicable diseases. As a matter of fact, we have responded to 20 emergency calls since July 1, 1950.

EPIDEMIC INTELLIGENCE

We have made progress this past year in the development of better facilities and methods for the detection and investigation of outbreaks of infectious disease. We regard this program as essential not only to our study of many little-understood diseases, but also as a guard against the possibility—which I trust is remote—of enemy attack, open or clandestine.

Our Microbiological Institute in Bethesda has organized a network of public and private laboratories to serve all parts of the country in the speedy identification of rare diseases or unusual outbreaks. Eighty laboratories are collaborating in this service. The Institute has also intensified its study of such diseases.

The Communicable Disease Center in Atlanta now has 21 physicians specially trained in epidemiology to assist in epidemic intelligence work in different parts of the country. They are distributed so that any community can obtain help within a few hours.

The Environmental Health Center in Cincinnati is using physical techniques for the rapid identification of infectious agents in the environment. For example, this research unit is using infrared light to identify bacteria and chemicals in air and water.

During 1951, our epidemic intelligence staff operated in 88 outbreaks of disease: 16 of poliomyelitis; 11 of infectious hepatitis; 6 of gastroenteritis, and the remaining 55 of 25 other diseases.

Infectious hepatitis is one of the most challenging problems in epidemic control today. It is an acute virus disease sometimes called epidemic jaundice. Our work in this disease illustrates the type of contribution we are making.

During World War II, the Public Health Service and other research organizations worked intensively on infectious hepatitis because it was a serious military problem, especially in the Mediterranean theater. Scientists then demonstrated that there are two viruses involved: one causes epidemic hepatitis and is transmitted in nature; the other causes serum hepatitis and is transmitted by transfusion of infected blood or plasma.

Dr. John W. Oliphant, a Public Health Service officer, worked full time on the problem of serum hepatitis during the last war. He was the first to demonstrate that ultraviolet light will inactivate the virus in plasma, a technique now used in commercial plasma preparation. In 1951, he returned to hepatitis research to head a joint project supported by the Public Health Service and the Department of Defense, for investigation of all aspects of the hepatitis problem.

Early in January, this brilliant scientist met with accidental death. Some of you may have read of the tragedy. Dr. Oliphant's untimely death is a great loss, not only to his colleagues in the Service and other research institutions but to his country and, indeed, to the world.

Epidemic hepatitis is becoming more and more a public health problem in this country. More cases are being reported today than at any time in the past. Currently, for example, our epidemic intelligence staff from the Communicable Disease Center is investigating an outbreak among Indians in Arizona involving more than 400 cases.

The urgent importance of our work in hepatitis was borne in upon me last September when, at the request of the Secretary of Defense,

I visited our military medical services at the front in Korea and along the route of casualty evacuation in Korea and Japan. Infectious hepatitis was said to be the second most important cause of lost time among our combat troops, being exceeded only by battle wounds. This disease, while causing few deaths, usually immobilizes a man for 60 to 90 days.

DENTAL HEALTH

In another important field, our dental research and dental public health programs have made an outstanding contribution to health through the use of fluorides in preventing dental decay. The earlier work of our scientists and demonstration teams in the application of sodium fluoride to children's teeth was made possible by this committee's support.

We are now recommending the fluoridation of public water supplies—a method which will reduce tooth decay in children by two-thirds. This truly wonderful discovery if widely adopted by our communities with fluoride-deficient water supplies, will bring about tremendous savings—in suffering, loss of teeth, and money.

During the past year, additional studies have shown that when this protection is afforded to children, it is carried on into later life. Our Dental Research Institute studied the teeth of adults in two cities—Colorado Springs and Boulder, Colo. The water supply in Colorado Springs contains natural fluoride and that in Boulder almost none. Adults 20 to 44 years of age in Colorado Springs have about 60 percent less decayed, missing, or filled permanent teeth than do adults of the same age groups in Boulder.

About 170 communities have installed fluoridation in their water supply systems and many others are considering this step toward better community health. You will find in the budget before you proposals to be discussed later by members of our dental staff, which are designed to speed the effective use of fluorides in public water supplies throughout the Nation.

RESULTS IN RESEARCH

As you know, the research programs of the Public Health Service and of other institutions throughout the country have expanded greatly since the war. This expansion is the result of greatly increased voluntary and governmental support. I should like, very briefly, to report certain results of this effort.

CANCER

Late in 1951 I had the privilege of talking with Dr. Charles Huggins at the University of Chicago Medical School about some of his work. Last Tuesday I had the pleasure of talking with him again and seeing some of his patients whom I had seen on the earlier visit. He has succeeded in halting the spread of advanced cancer in several patients by total removal of both adrenal glands. The adrenal glands are two glands which lie above each kidney. They are loosely attached to the kidney. They secrete a number of hormones. Dr. Huggins' results are challenging but I do want to make it clear that this is an experimental program, exciting to be sure, but not one which is ready for widespread application.

Dr. Huggins was kind enough to give me some photographs which I will pass to you. These, unfortunately, had to be made from color slides and they are not quite as good in black and white as the color slides themselves were.

In the first photograph you see a woman 65 years of age who had a recurrent mamary cancer in the scar where her breast was removed. She also had a large tumor in her opposite breast. Dr. Huggins removed both of her adrenals, and this recurrent lesion underwent very rapid regression. That is, it diminished in size.

If you look at the second picture, you will notice how the scar has changed. It is not thick. That thickness in this case was actually cancer. So there is an actual diminution in the extent of the cancer in this advanced case.

Next, I have another set of two pictures which will interest you. These are pictures of X-rays taken of the chest of a woman aged 42 who had a very extensive cancer which had spread through her entire body. In this case too, it was breast cancer. Cancer of the breast tends to spread to the bones and to the lungs, and as it spreads to the lungs it very often causes a blocking up of fluids which ordinarily would be absorbed around the lungs and in the lungs.

I might say both of these patients were patients with incurable cancer, far advanced, which had spread through the body; both were destined for very early death.

She had much difficulty breathing because one side of her chest was completely filled with fluid in which were free-floating cancer cells and other debris. They had to tap her chest every 10 days. Following the operation—that is shown in the second picture, which is an X-ray taken approximately 6 months after the operation—she has not had a single tap. In other words, the fluid stayed down. There has been enough regression of the cancer that the absorption of serum and various other things has been going along relatively normally.

Dr. Huggins' work was done in the new cancer research center, built and equipped at the University of Chicago, in part, with funds from the Public Health Service which this committee recommended.

Your interest in medical research has another relation with Dr. Huggins' work. A few years ago such daring surgery could not have been atempted because man cannot live without his adrenal glands. We live less than 24 hours after they are removed. The advent of cortisone made it possible to supply these substances artificially and made it possible for these patients to live.

When the Public Health Service came to you in 1949 and said that cortisone and ACTH were remarkable substances of enormous potential value and that immediate study was needed on a wide scale, this committee responded instantly. Funds were made available so that scientists throughout the country could study the value of these drugs. This speed-up of research and evaluation of cortisone, ACTH, and related compounds was of the greatest possible importance to scientists, as well as to practicing physicians and the public. The grant program you have supported in this field has been continued. Had a slower approach in research with cortisone been made, it might not have been possible for Dr. Huggins to do the research I referred to.

I brought along some cortisone tablets. They do not look much different than aspirin tablets or any other tablets one takes. I wish

to remind you that without adrenal glands we cannot live, but if we carry a little packet of cortisone tablets in our pockets, take two a day, life can go on.

Mr. BUSBEY. Doctor, would that be true if the person involved were not a bed patient?

Dr. SCHEELE. These patients are up and ambulatory. One of these patients—I would like to leave this case off the record——

(Remarks off the record.)

Dr. SCHEELE. As I said before, this is an experimental program. Dr. Huggins will have reported approximately 30 cases within the next few days. This really points the way to the urgent necessity for a whole range of collateral research efforts. This treatment by itself is probably not going to be the answer. The fact is that in some of these cases one gets this remarkable regression of the spreading tumor. Dr. Huggins does not suggest that they are cured. He does not say there is no cancer left in these patients.

This research does suggest that something made by the adrenal glands plays some important role in cancer of the breast and cancer of the prostate.

Mr. SCHWABE. Recession or retardation in the progress of the disease is about all we know so far?

Dr. SCHEELE. Yes, sir; and whether or not this procedure is one which in 2, 3, or 5 years will be one we advocate as the thing to be done for patients with advanced cancer on a routine basis or even with early cancer, only history will tell.

I selected this case not only to show you the kind of dramatic and remarkable things that are happening in medical research but also to show you how, as I said earlier, some of the programs that you have been supporting through the Public Health Service and that the taxpayers have been supporting, in this case the building of laboratory facilities has given Dr. Huggins a house in which to work. In addition the speeding up of the work on cortisone and ACTH brought history to the point where in early 1951 Dr. Huggins could go forward with this drastic kind of surgery. Before that time he could not have done this and possibly, if there had not been a quick speed-up in research in cortisone, it might have taken 2, 4, 5, or 10 years longer in the normal course of research events for science to have arrived at a point where such a radical procedure as taking the adrenals out would have been possible. I wanted to show these interrelationships.

Mr. SCHWABE. These are not the only two cases that Dr. Huggins has had in which he has attempted the same remedy or therapeutic, are they?

Dr. SCHEELE. No, sir. He has had now approximately 30 cases.

Mr. SCHWABE. And the other cases percentagewise give a result in about what order?

Dr. SCHEELE. Off the record, if I may.

(Remarks off the record.)

Dr. SCHEELE. Next, I wish to mention a few of the many accomplishments made by our own Public Health Service scientists of the National Cancer Institute.

Dr. Bierman and his associates have successfully used a small catheter that can be introduced into arteries for long distances to deliver chemotherapeutic drugs to deeply embedded cancers. This enables the surgeon to use drugs which affect the cancer but cannot be

given otherwise because of their effects on the whole body. Thirteen of forty-three patients who were dying of advanced cancer in 1950 are alive today as a result of intra-arterial chemotherapy, as this technique is called.

In other words, they passed small plastic tubing of the type before you down a vessel, and they passed the drug right to the tumor area.

Mr. SCHWABE. Through the vein?

Dr. SCHEELE. Actually the arteries because in the vein the drug would flow away from the tumor. You want it to go to the tumor, so you get it on the feeding side rather than on the discharge side. The arteries carry the blood to the tissues, and the veins carry it away. In this case you want it to be carried right into the tumor area.

Interestingly enough, they are using an end product of World War II research—the nitrogen mustards, which are fairly toxic when given by usual routes, but by giving it this way it is kept well localized to the tumor area. It has caused excellent results in 13 of the 43 patients.

Under the leadership of Dr. Wilton Earle, other Cancer Institute scientists have been able to grow various kinds of normal living tissues rapidly and in large quantities on helices of pyrex glass. Ten years ago they could only grow 5 or 10 milligrams in one flask. Today they are growing more than 1,100 milligrams of tissue in a single flask. A teaspoon is about 4,000 milligrams, so they are able to grow quantities up to a fourth of a teaspoon as compared to a fortieth of a teaspoon in the early days.

I have some specimens. This is actually growing tissue, growing on a sheet of cellophane. Six years ago that would have been considered a very luxurious growth, but today, of course, we have some other things to show you here that are far better than that.

The second one—there are two there—is a stock culture of cancer cells which has been grown for more than 10 years in culture, and this piece or group of cancer cells—some are floating free—was actually started from a single cell taken from a tumor. The culture probably contains at least 50 milligrams of wet cells.

The next one, No. 3, contains cells from human skin. In other words, that is skin growing in a bottle—human skin. This work is being carried on in collaboration with members of the staff of the Naval Medical Center across the road from our group in Bethesda. They are studying the possibility of skin grafting from human skin cells grown in bottles. The standard way of doing it now is to slice thin layers of skin off other parts of one's body and transfer those to the areas that have lost their skin.

If we can take human skin, and grow it in a bottle, we can avoid the disfiguring. And sometimes we have serious problems, especially in wartime, in seriously burned casualties who have lost a very large part of their body area and may not have much skin left to take pieces off of to start little budding areas of skin in the burned areas.

Mr. SCHWABE. Taking it from another individual is not always successful.

Dr. SCHEELE. That is correct. It usually has to be from the same individual. There have been one or two cases where they have gotten a brother to come in, hoping that would work better.

No. 4 is a culture of cells made from a whole chick embryo. This type of culture is under intensive study by a number of laboratories

to explore their use for growth of pathogenic viruses in culture. There are some exciting things on the horizon in the virus field—in cancer, for example—which this may help with.

No. 5 is a sample of glass helices which are used to increase the amount of growth. In that original little flask you saw one cannot grow very much. The cells do not get very thick. They will spread out across the whole bottom surface, but they will not grow in depth. These little pyrex glass helices we buy in large quantities, and when the cells are put on them with the nutrient fluid, they will grow in very large quantities.

That next one is a similar container showing luxuriant growth. The cells that are growing here have been stained with a dye to make them show. The glass itself would not have dyed, but you will see if you revolve the flask that there is a coating of blue around each of those little pieces of glass. In other words, the surface area has been increased over what would have been in the bottom of the bottle.

No. 7 is the type flask that they are now using to grow very large quantities—1,100 or 1,200 milligrams—of cells at one time. It is just a bottle, as you see, with a lot of little helices. They have to have a means of putting some food in and taking off some of the old fluid which is ready to be discarded. One has to do in the flask the things that our kidneys and our heart and our lungs do for us in the human body.

Off the record.

(Remarks off the record.)

Dr. SCHEELE. The implications of this work of Dr. Earle's are tremendous. The possibility of growing normal tissue cells in large quantities is now being explored by private industry. This work may lead to new ways of producing hormones and other medically important substances elaborated by living cells outside the animal or human body.

In other words, just as glands in the body make cortisone, it might be possible to transplant those glands as cells into these flasks, grow them there, and, as we take off the fluid, get out the cortisone and have a means of doing this outside the human body. One knows how ingenious our industrial people are. One could visualize this being done in tremendous vats over a large area with ultimately a very tremendous yield, much as they moved penicillin production from one test tube up to tremendous big tanks now holding thousands of gallons of mash. They produce it in almost unlimited quantities.

Those are some of the things that medical science is doing.

Mr. BUSBEY. Isn't this Dr. Earle the one who has been working on the growing of tissues in the Cancer Institute for many, many years?

Dr. SCHEELE. That is the one.

Mr. BUSBEY. The man we talked to out there last year?

Dr. SCHEELE. Yes, sir: he is the one.

Just as a little aside, another man out in the Cancer Institute, Dr. Burk, has been working on the use of solar energy as a means of making sugars out of certain plants called chlorella. He, with Professor Warburg, of Berlin, rediscovered certain theories on the use of solar energy in the photosynthesis process like the one which goes on in the plants that we plant in the field and the leaves of trees. Their findings actually are of major significance and point the way to the ultimate possibility of growing food outside of soil.

This is a picture I just saw in Science News Letter the other day. It is the roof of a building somewhere in the United States where somebody is trying to produce food by just such a technique.

HEART DISEASE

Dr. Van Slyke, Director of our National Heart Institute, will tell you about some of the achievements in cardiovascular research in the past few years. For instance, a mechanical heart has been devised that will carry part or all the circulation temporarily in patients undergoing heart surgery or in acute emergencies such as heart failure or respiratory failure. Six of the Nation's outstanding research surgeons have received grants from the National Heart Institute to aid them in developing and perfecting this remarkable apparatus.

Another group of scientists, supported by Public Health Service grants, have gone far in perfecting techniques for the preservation and implantation of blood-vessel grafts. A number of operations have been performed with great success.

Several new chemicals for reducing high blood pressure were reported during the year. The National Heart Institute's own scientists are engaged in many projects for the study of these chemicals.

CHEMOTHERAPY

In the past year many advances have been made in our knowledge of the effectiveness of cortisone, ACTH, and related steroid compounds. Cortisone, for example, has been found effective in treating certain rare diseases of the eye, the toxemia of pregnancy, severe exhausting asthma, swelling of the larynx, and some acute skin disease.

Corticosterone, a new related drug, has proved successful in its first trials as a treatment for Addison's disease, a debilitating and fatal disease associated with damaged adrenal glands.

Scientists at the National Institute of Arthritis and Metabolic Diseases synthesized compound F, also known as hydrocortisone, through the action of an adrenal gland enzyme upon a soybean derivative. This compound is thought to be the true hormone of the adrenal cortex.

RESEARCH NEEDS

I have given you only a small part of the story of accomplishment in our research and research-grants programs. Medical research is going forward on many fronts. But to balance this report I must say that we are barely scratching the surface in many important fields. Among these underdeveloped areas are mental disease, cerebral palsy, epilepsy, blindness, multiple sclerosis, arthritis, and a host of other crippling diseases. These are the causes of a large share of the costly and disabling illness in this country.

We in the Public Health Service who are charged with administering aid to research often worry because our programs and those of voluntary agencies combined are not more adequate for the research needs. We are conscious, of course, of the difficult choices that you gentlemen must make in setting the pace of our Federal programs.

Only during the past decade have medical scientists begun really to penetrate the complexities of the nervous system. The total re-

search effort in this critical area, however, is small indeed. We hope that our new National Institute of Neurological Diseases and Blindness will be able to make a small start toward major achievements in our knowledge of the nervous system and the disorders affecting it. We are barely touching research in eye disorders and blindness and in rehabilitation generally.

Support of research and training through the National Institute of Mental Health also is essential. Increased knowledge of mental disease and more trained personnel are the greatest needs. Without these, we can never hope to reduce the current annual cost to taxpayers—more than half a billion dollars—for public care of the mentally ill and mental defectives.

NATIONAL HEALTH

I should like now to give you a few highlights from the Nation's health record. I am glad to report continuing progress during the past year.

The estimated general death rate for 1951, for example, is 9.6 per 1,000 population. This represents a decline of 10 percent since 1940. Both infant and maternal mortality also are at all-time lows.

Influenza, pneumonia, and tuberculosis are the only infectious diseases which remain in the list of 10 most frequent causes of death. Although these diseases headed the list in 1900, today they rank sixth for influenza and pneumonia combined, and seventh for tuberculosis.

Most of the acute infectious diseases continue to decline. Thirty years ago, for example, in 1921, more than 100,000 cases of smallpox occurred in the United States; in 1931, the figure was 30,000. In 1951, we are proud to report that the number of smallpox cases in the entire United States was just 13.

Vaccination gives us a safe, simple, and inexpensive method of preventing small pox. In relatively few communicable diseases do we have such a clear-cut preventive. The virus diseases which I mentioned earlier, including influenza, represent the major part of our unfinished business in communicable-disease research and control.

Through case finding and treatment of infected persons, we have had considerable success in reducing tuberculosis and syphilis. The cooperative Federal-State programs in these fields have been supported for a number of years by this committee. These infections are so widespread in the population and so stubborn in resistance to our present-day control methods that they are still major public-health problems.

TUBERCULOSIS

Tuberculosis, for example, kills more people each year than do all other infectious diseases combined. About 121,000 new cases were reported in 1950, and there are probably 500,000 persons with tuberculosis known to physicians, hospitals, and health authorities.

More than half of the patients known to health departments are not discovered until they have had ample opportunity to spread tuberculosis to persons now free of the disease. If we do not continue our Nation-wide combined attack on tuberculosis, there is no question in my mind that the death rate from this cause will begin to rise again.

VENEREAL DISEASES

The same is true of our venereal-disease control program. During the 18 months since the outbreak of war in Korea, the downward trend in syphilis has continued in this country. At present, United States Armed Forces have the lowest syphilis rates recorded in this century. This is an experience unique in the history of venereal disease, since mobilization and conditions of war have always been accompanied by increases in syphilis. The total reported syphilis cases in 1951 was 214,000 representing a reduction of nearly two-thirds since 1943.

This accomplishment has been brought about by close cooperation of the Public Health Service with military medical authorities, private physicians, and State and local health agencies. During the past year the Public Health Service has had to concentrate a larger share of its venereal-disease resources in critical areas in order to afford the military and civilian authorities urgently needed assistance. Any relaxation of the effort to find and treat infected persons in the civilian population will most certainly result in an upsurge in the incidence of venereal disease.

HEALTH SERVICES

The reductions in death rates and communicable diseases are the unheralded victories of our Nation's health services. Such gains cannot be held, however, without continuity of service. Alert State and local health departments are essential to follow up the good work accomplished and to maintain vigilance against new or reactivated threats to health. The State and local health agencies, in turn, need the technical services and Nation-wide fact finding which the Public Health Service provides for their use in the development of their programs.

I am afraid, however, that folks have come to rely on their health agencies so much for safe water and food and low communicable-disease rates that they don't realize what would happen if health department activities were to diminish. In this connection, I should point out that our present good record has been maintained despite increasing costs of health services and decreasing budgets for health agencies. The day is coming when this discrepancy between costs and level of support may be reflected in a lowering of the Nation's health status.

Over the past 20 years our State and local health departments have been greatly strengthened. The services which organized public-health work can provide so effectively have been made more widely available. Local health services, however, are far from adequate in most parts of the country. Any further diminishing of services may well cost us a great deal more than we save, in terms of increased disease and preventable deaths, greater loss of productivity, and larger costs of medical care.

I need not remind you, I am sure, that the Soviet Government thrives on cold war. More than one-third of the world's 2½ billion people are now behind the iron curtain, in that they reside in areas controlled or dominated by Russia. In sheer numbers, we are not able to compete with the Communist nations. We must compete, as we have in the past, in the quality of our manpower. Despite the major health

problems which I have mentioned, we have the healthiest population in the world. For this reason we must continue and intensify our battle for more effective health services and for better health.

Our public health and research programs are always important factors in the Nation's economic welfare. Today they are in the Nation's first line of defense. For, if war should come, every ounce of energy the Nation's health workers spend now will be returned many times in the extra strength they will give the American people in the day of battle.

HOSPITAL SERVICES

We can report progress in the expansion of the Nation's hospital facilities. Since the Hospital Survey and Construction Act went into effect in 1946, 1,700 hospitals, health centers, and other allied projects have been approved for Federal aid. More than 800 have been completed and are in operation. More than 400 new general hospitals have been built in small towns where the people had no hospital facilities, and 130 other new general hosiptals have replaced facilities that were fire hazards or otherwise unsuitable.

When the 1,700 construction projects are completed, the Nation will have added 82,000 new hospital beds to its supply. Despite this encouraging outlook, we still need, according to estimates of the States themselves, a total of 874,000 additional beds.

HEALTH SERVICE DEFICIENCIES

In reporting progress in some areas and emphasizing some of our continuing major problems, I should be remiss if I did not call your attention to some of the gap areas in our current national health program. The Public Health Service has attempted to make a small contribution to the solution of some of these problems, but our resources are far from adequate.

AGING POPULATION

As you know, our population is aging. The gains in life saving and disease control which I mentioned earlier have chiefly affected the younger age groups. Death rates from diseases of the heart and circulation, cancer, and other chronic diseases continue to increase. These diseases chiefly afflict the middle-aged and the elderly.

Throughout the country there is a critical need for a more intensive attack on the chronic diseases. We need also to do a better job in hygiene of the aging and in medical rehabilitation of the chronically ill and handicapped. There is a substantial amount of medical knowledge and many effective drugs and methods which, if more widely applied, would save thousands of lives. What is equally important, there are methods available which would restore handicapped and chronically ill persons to better health and to self-satisfying, if not self-sufficient, life. Unfortunately, we are doing almost nothing about health of the aged and medical rehabilitation.

ENVIRONMENTAL HEALTH

Thousands of new chemicals have been introduced into man's environment within the past 20 years. Thousands more are being added.

Industrial personnel who produce new materials and manufactured goods are exposed to chemical and physical hazards unknown to industry. The general public is exposed to many such hazards in obscure ways and to an extent unknown.

The funds which this committee has authorized to improve our facilities for environmental research are bringing to completion the new Environmental Health Center in Cincinnati. It is scheduled for occupancy early in the fiscal year 1953. Our scientists there are already planning a systematic program for the investigation of the basic environmental forces which modern industry has introduced. These include not only the chemical forces but also such physical forces as are produced by various radioactive substances.

WATER POLLUTION CONTROL

Increased urbanization and the rapid growth in the size and variety of American industry have created an emergency in the use and development of the Nation's water resources. These changes have multiplied the sewage discharged into our streams and added ever-increasing amounts of chemicals to the water on which our lives and our industries depend. The use of water from our streams is not only essential to sustain life, but also to sustain our industrial economy.

We have made a start—but only a feeble start—toward cleaning up our streams. If we do not place more emphasis on water pollution control in the next few years, we may expect a crisis in the availability of water both for day-to-day living and for the production of goods and services for national defense.

OCCUPATIONAL HEALTH

During the past year, the Public Health Service reorganized its industrial hygiene program to focus on the newer problems which may be expected to arise as defense production goes into high gear. Our Division of Occupational Health, formerly the Division of Industrial Hygiene, will continue its services to the States, industries, and other Federal agencies in investigating emergencies and helping them solve problems arising in the occupational environment. Our resources for this purpose have already been taxed and many requests have had to be turned down.

However, if the Nation's labor force is to be kept on the job—strong and healthy enough to produce the goods and services we need—occupational health services will have to be expanded and distributed more widely. Health promotion, prevention of disease, and early return to work after illness are the requirements of an effective occupational health program. Programs of this sort are needed especially in the Nation's smaller plants which employ about 75 percent of the labor force.

PERSONNEL SHORTAGES

Perhaps the biggest single gap in our national health and medical services—as you are well aware, Mr. Chairman—is the personnel shortages in the health professions. This shortage—like shortages of steel and copper—can be met in part by increased production and in part by conservation of existing supplies.

In the personnel field, the training of more doctors, dentists, nurses, engineers, and other health workers is an urgent need. Throughout the country, health agencies, hospitals, and related organizations need to adopt methods which will make the maximum utilization of professional personnel. This requires careful study of needs and resources and wide use of persons who can do certain jobs without professional training.

Our Division of Nursing Resources has cooperated with 28 States in surveys of nursing needs and training resources. The result has been gratifying, in that 19 of these States have set up a permanent mechanism for State-wide planning to meet their total nursing needs. Our Divisions of Medical and Hospital, Dental and Engineering Resources have undertaken similar studies designed to stretch the existing supply of professional personnel and to increase the efficiency of services.

Our budget for the fiscal year 1953 is before you. It calls for a total of $302,398,000 which includes $82,930,000 for liquidation of obligations incurred in prior years and $219,468,000 for grants and direct operations.

The persons directly responsible for our various technical programs are available to give you an account of accomplishments and work programs. They will also explain to you why the Nation needs to invest these sums in the health of the people. I use the word "invest" advisedly, for I sincerely believe that what we do to improve the health of the American people pays off, not only in money but also in the business of living a better life.

We are asking you to appropriate about $46,500,000 less than the comparable amount for 1952. About the only consolation I find in that figure is the hope that it will be easier to persuade you to allow the full amount requested than it would have been had we come up with an increase in the budget, or even with an attempt to hold the line.

Mr. FOGARTY. Thank you, Doctor. That decrease of $46,000,000 is mainly made up of grants for construction, is that true?

Dr. SCHEELE. Yes, sir; that is correct.

EXPLANATION OF ADDITIONAL PERSONNEL

Mr. FOGARTY. Are you asking for additional personnel? I know we will have all of these various divisions under your control before us as they appear in the justifications here, so they will be asked to justify the increases or decreases. But I thought generally you might be able to tell us.

Mr. HARLOW. Yes, sir. There is a total increase in positions requested, Mr. Chairman, of 883, with a net increase in average employment of 110.

Mr. FOGARTY. What do you mean by that—average employment?

Mr. HARLOW. I mean that some of these new positions will only be for a part of the year, so that, averaging it out throughout the year, we will have an average number of less.

Mr. FOGARTY. What is the reason for this increase?

Mr. HARLOW. The only one that is of any amount, Mr. Chairman, is in the National Institutes of Health, brought about by the opening of a new clinical center.

Mr. FOGARTY. You did not mention that in your report.
Dr. SCHEELE. No, sir.

STATUS OF CONSTRUCTION OF NEW CLINICAL CENTER

Mr. FOGARTY. Tell us something about that. How it is progressing and when you expect to open?

Dr. SCHEELE. Mr. Chairman, with your permission I would like to pass that to Dr. Sebrell, who is in direct contact with it.

Mr. FOGARTY. Just give us some summary information.

Dr. SCHEELE. The work is pretty much on schedule. The entire exterior of the main building has been completed. They are working inside on the lower floors. The plumbing is in the entire building. They are beginning to do tile work, plastering, and most of the outbuildings have been completed, although the heating plant is still in process. The animal building is nearing completion. The garage building, that is, the storage building, has been finished.

Currently it is anticipated that we will have patients in the hospital April 1, 1953.

We have been very fortunate. The shortage of steel, copper, brass, aluminum, which is now affecting construction in the country—that is, projects which are just getting under way—has not been a factor in slowing us down because contracts for motors and mechanical equipment and other things were placed several years ago and actually were in fabrication and being delivered before the time we first became aware we were going to have major shortages as a result of the military program. We got under the wire, so to speak, timewise there.

We are hopeful that no major shortages will affect the final completion of the building.

RECRUITMENT OF PERSONNEL

Mr. FOGARTY. Do you anticipate any trouble in the recruitment of personnel?

Dr. SCHEELE. No, sir; I think we will do fairly well. There will be some problem getting nurses. The largest number of people whom we are required to recruit are in the service areas—nurses, attendants, elevator operators, and others. We think that the community here has enough—the District, the nearby Maryand area and nearby Virginia area—to enable us to get under way in good order. But I doubt that it will be just easy sailing in all fields.

Mr. FOGARTY. Have you already started a recruiting program?

Dr. SCHEELE. Yes, sir, particularly the scientists. Some of this increase is intended for taking on scientists of major ability to work in the program.

I think—is it fair to say, Mr. Harlow?—that we actually have decreases in personnel in many of our programs and that the National Institutes of Health pick up some of the losses in other places and add a few more.

BUILDING TO BE IN OPERATION BY APRIL 1953

Mr. FOGARTY. I realize that is going to be a big increase, and it is our responsibility to foot the bill. Will this budget take care of all the needs for personnel in that new building and get it into operation by April 1953?

Dr. SCHEELE. Dr. Sebrell.

Dr. SEBRELL. Mr. Chairman, we anticipate taking the first patients about the first week in April of 1953. We will take just a few patients at that time, about 15, in order to test out the building and the operation of the scheme and things of that kind. And then patients will be gradually added according to a schedule that will go up, until in the first 6 months of operation we will have the building operating at approximately half capacity, which will be around 200 to 250 patients.

Before patients are actually admitted early in April it will be necessary for us to put some laboratories and personnel in the building to get things in operating order before the patients are actually brought in.

At the present moment we do not anticipate any difficulty in finding sufficient staff. The funds asked for are sufficient for us to open it according to the schedule planned.

Dr. SCHEELE. Mr. Chairman, if I interpret your question correctly, this scheduling of staffing is not the one which in the first instance we thought and still think we could follow. In other words, this is slower staffing than was proposed in the pattern which we think we could actually follow.

ESTIMATED COST OF PAY ACT

Mr. FOGARTY. You have $346,600,000 available in 1952. What do you anticipate the cost of the pay increases will be in 1952?

Mr. HARLOW. Mr. Chairman, we figure it will cost us $4,326,000 in 1952. However, the amount included in the budget and the proposed supplemental in 1952 is $3,320,500.

Mr. FOGARTY. In other words, you are going to absorb about $1,000,000 of the pay increases.

Mr. HARLOW. Yes, sir—approximately 25 percent.

Mr. FOGARTY. This $346,600,000 should be, then, about $350,000,000, for comparable purposes, is that correct?

Mr. HARLOW. Yes, sir; I think that is correct for the current fiscal year.

Mr. FOGARTY. If you get your supplemental of $3,000,000 plus.

Mr. HARLOW. Yes, sir.

Mr. FOGARTY. Then you are asking for $302,000,000 in 1953, and that includes funds for the pay increases, does it not?

Mr. HARLOW. Yes, sir.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask of the Bureau of the Budget?

Mr. HARLOW. The total of our A and B budgets, Mr. Chairman, was $415,640,000.

EXPLANATION OF LANGUAGE CHANGE

Mr. FOGARTY. You have a change in the language this year for the elimination of the appropriation "Commissioned officers' pay, etc." What is the reason for that?

Mr. HARLOW. Mr. Chairman, that is the only change we are proposing in our appropriation structure—the elimination of the appropriation to which we transferred all the funds necessary for the pay of the Regular Corps officers. It does not mean any real change in the method of appropriating, however. You have heretofore carried the money for the pay of the Regular Corps officers in the individual program appropriations, and we have transferred that into this one pay approriation for accounting and expenditure purposes.

It seemed that the present method just represented more or less an unnecessary step—except for one thing. It does give us a flexibility in the assignment of these officers in that we are able to reassign an officer in case of emergency or for other causes without changing the appropriation from which he is paid, since we had already transferred the money to this one central appropriation.

We are asking you to also give us a transfer authority as between appropriations, as you will have observed, so that we will be able to maintain at least a modicum of this flexibility that we otherwise might lose by not having a central fund for the pay of these officers.

TRANSFER OF FUNDS TO CIVIL DEFENSE

Mr. FOGARTY. What is the explanation of this transfer of $800,000 to Civil Defense?

Mr. HARLOW. $800,000? Oh, that is the blood program, Mr. Chairman, that has been conducted by the National Heart Institute in the National Institutes of Health. It was a program that grew out of some work which was being done by the National Institutes of Health. It was considered so important for civilian defense purposes that they asked us to expand it considerably. You made a healthy allowance for that in the 1952 appropriation. It was decided for budget purposes to carry it in 1953 in the budget for the Civilian Defense Organization. So it has been dropped from our appropriation.

COMMITTEE ON AGING

Mr. FOGARTY. I see. Dr. Scheele, in your statement you spoke of the health problems of the aging. It was brought to our attention that a committee on aging has been set up in the Federal Security Administration. What part do you play in that committee?

Dr. SCHEELE. Dr. Mountin, of our staff, is the Public Health Service representative on the committee, and the committee essentially functions Agency-wide, coordinating, correlating the individual interests of the constituents of the Agency. In our instance, Dr. Mountin plays a major part in this program, which is designed largely to provide an Agency-wide approach to the problem.

Mr. FOGARTY. How is it working out?

Dr. SCHEELE. I would say very well. The committee has been very active. One of their recent outstanding accomplishments was the holding of a large meeting of professional health people in St. Louis to discuss research and other problems of the medical aspects of the aging population.

In general, I would say it is working out very well.

Mr. FOGARTY. You are satisfied with it?

Dr. SCHEELE. Yes, sir; I am.

Mr. FOGARTY. Mr. Denton.
Mr. DENTON. No questions.
Mr. FOGARTY. Mr. Schwabe.

EFFECT OF APPROPRIATION DECREASES ON PROGRAM ACTIVITIES

Mr. SCHWABE. Dr. Scheele, I notice that there is a considerable decline in the requested appropriations under the item of venereal diseases, namely, $1,429,360 in 1953 as compared with actual appropriations for 1952. Is that due to the fact that it is considered that less assistance may be necessary to States and communities in handling these diseases?

Dr. SCHEELE. No, sir; that is due to the necessity for our cutting the cloth of our whole Public Health Service operation into the cloth of total money which we are permitted to ask for, and represents a sum of money below that which we originally asked for for venereal-disease work.

Mr. SCHWABE. A considerable sum, does it not?

Dr. SCHEELE. Yes, sir; it does.

Mr. SCHWABE. As a matter of fact, in view of the general statement you have made before the committee this morning, this reduction would seem to be bordering on a situation that might be dangerous to the further spread of venereal disease throughout the country, is that right?

Dr. SCHEELE. Yes, sir; that is exactly correct.

Mr. SCHWABE. In other words, you have considered that venereal disease has been largely whipped or at least materially reduced in incidence due to the instruction and the ability of our citizens to work and to live with the program as it has heretofore been in operation.

Dr. SCHEELE. We have the means to keep the situation under control.

Mr. SCHWABE. With the money that has heretofore been afforded you—and if that amount of money should be continued, you anticipate that your work would progress successfully and that the disease would not be on the incline.

Dr. SCHEELE. Yes, sir; that is correct.

Mr. SCHWABE. With this reduced amount, do you apprehend there is a danger that might result in a further increase of the diseases that we have referred to—the venereal diseases?

Dr. SCHEELE. Yes, sir; I do anticipate that such an increase could occur. We see certain things going on.

Mr. SCHWABE. That statement is in agreement with your general statement this morning before the committee.

Dr. SCHEELE. Yes, sir; it is.

Mr. SCHWABE. With reference to the venereal diseases, your office and the services it furnishes is a great stimulus not only to the treatment, or the cure, but to the lessening of the incidence of venereal disease; is that not true?

Dr. SCHEELE. Yes, sir; that is correct. One of the principal things done in lessening incidence has been following up to the source. That is, when an individual is infected, one tries to ascertain who the source was and then make sure, insofar as one can, within the laws and regulations of the community, that that individual, the source, comes under treatment so that no matter what happens after that, or at least for the time being, the individual will not spread the disease. We operate

such a program in cooperation with various States and military establishments.

Mr. SCHWABE. And with your merchant seamen's hospitals, inpatient and out-patient hospitals.

Dr. SCHEELE. Yes, sir.

Mr. SCHWABE. I visited several of those during the past year and I observed the work that is being done there very carefully. I was favorably impressed with it, I might say.

I think that we should survey very carefully the danger that might result here. I wanted your frank statement along that line and I would like to hear from the head of that division when we get to him.

Dr. SCHEELE. Yes, sir. I believe he follows next in order.

Mr. SCHWABE. Now, would a similar situation endanger any of the other functions of the Public Health Service if amounts were reduced in your attempt to cut the pattern to fit the cloth, as you expressed it a while ago. If so, point out such instances.

Dr. SCHEELE. Well, two come to mind immediately. There has been some lowering in the amount for tuberculosis control.

Mr. SCHWABE. Yes; that is the next item after venereal diseases.

Dr. SCHEELE. Here, as in the instance of VD control, we have this thing on the run and we are almost really at a point where an intensive program would be required. At the same time we actually will be operating below the level we think would be even a minimum amount to hold the line.

Mr. SCHWABE. However, the amount of reduction that you have indicated in the request here is much less, of course, than it is for venereal disease. It is only $192,000.

Dr. SCHEELE. Actually, the difference between our request on the Bureau of the Budget and the allowance was $274,000 less. In the case of venereal disease, it was $1,082,000 less.

Mr. HARLOW. Those figures are on a comparable basis, Mr. Schwabe, after making allowances for the pay increases in 1952 and other adjustments.

Dr. SCHEELE. There is another area which causes us some alarm and that is that in our venereal disease program, our tuberculosis control program, cancer, heart, mental health, in some of our general programs of assistance to States we have been providing technical services. We have had workers whom we have loaned to the States to help them take care of certain problems that they were not staffed to do; people who have gone in and demonstrated techniques which the States were not completely acquainted with sometimes and we hoped they would finally pick them up themselves. In each one of those programs where a technical assistance program has been in effect for a good many years, there has been some reduction. In total I believe this adds to something in the magnitude of approximately $1,200,000 across the board for all of the activities. Part of that was referred to in our discussion of VD and part of it was in the discussion of TB.

STATE AND LOCAL RESPONSIBILITIES

Mr. SCHWABE. Do you find that the States and localities are assuming some of these additional burdens and responsibilities?

Dr. SCHEELE. Yes, sir; they are.

Mr. SCHWABE. Over and above what they have assumed in the past?

Dr. SCHEELE. Yes, sir; they have—although there have been slight decreases in appropriations for health work in some States. But I must point out, too, that the States have done a wonderful job of picking up these activities. There are so many undone ones, there are so many areas that even we in the Public Health Service are barely scratching the surface of that we have an expanding front of activity. They pick things up but then we have new things to do.

As one example, we don't do much about the problem of alcoholism. That is a substantial problem. The alcoholism problem in industry is one of the greatest wasters of time next to the common cold. It is a far greater waster of time than accidents in plants themselves from machinery or other hazards. Problems like these are things which are in the expanding horizon of things which the health departments have before them to do and we in the Public Health Service have before us to do.

Mr. SCHWABE. But not a great deal has yet been done with those problems of the type you mention.

Dr. SCHEELE. That is correct. So, while the States have been picking things up, there are at the same time many more to be picked up, and we do not feel that we are at the point of being able to curtail the extent of our program without there being loss somewhere in terms of program accomplishments.

DIFFICULTY IN ESTABLISHING ACTIVITY PRIORITIES

Mr. SCHWABE. With reference to these new programs or new treatments or remedies or whatever they may be, the discussion of which you incorporated in your general statement in a very interesting fashion this morning, I am sure you realize that the problem of this committee is very difficult, too. At least the member of the committee now addressing you does not know where the limit should be placed. It is a guess at best and we crave your cooperation in giving us the benefit of your best advice as well as that of others who are interested in these problems.

It may be, as I have observed, that an experiment along a certain line would progress for many years without any apparent or tangible results or without any beneficial results to be measured in concrete terms—and maybe never. And in other instances, these startling revelations or discoveries, discovered accidentally or incidentally or otherwise, as many of them are, may be worth the cost of the whole program. That is the great range in which we are trying to work here.

I hope as we go ahead with this that you will try to tell us, for instance, that there are certain programs which you consider vital and important but where you could do with a little less or that you need more in another instance to make a program effective and to conclude something you have started which you believe is worth while. Be as practical with us as you can. I know the other members of the committee will agree with me that is what we are seeking—the practical approach, as nearly as possible.

Dr. SCHEELE. Yes, sir; we wish to do that. We appreciate the problem that the committee has in finding enough money to maintain

all good activities in this period when our total national expenditures are high especially because of the military program.

Mr. SCHWABE. That is right.

Dr. SCHEELE. We find ourselves, though, in that dilemma which I mentioned with reference to the health departments. There are still so many undone things that it becomes very difficult to suggest contraction.

Mr. SCHWABE. And there always will be.

Dr. SCHEELE. It becomes a difficult thing for us to distinguish sometims how one can set a priority. You ask about areas where there was some curtailment.

Mr. SCHWABE. I just wanted to use that as an illustration of that situation as it undoubtedly has appeared to you in making these requests.

NEED FOR BUILDING IN ATLANTA

Dr. SCHEELE. Yes, sir. We have already suffered many heartaches over the things that are not here. We hoped, for example, we could go forward with a decent building for our work in Atlanta. Under this budget, that is not possible.

Mr. SCHWABE. You have the land there already.

Dr. SCHEELE. Yes, sir. Emory University gave the Government the land.

Mr. SCHWABE. But you do not have the money for the construction of the building.

Dr. SCHEELE. That is correct.

Mr. STEPHENS. I might add, Mr. Schwabe, we have the planning money. The plans are under way.

Dr. SCHEELE. Yes, sir, the plans are being drawn. I mentioned research in toxicology and some of the new work we are going to do in that field. Yet we are barely scratching the surface of some of these problems which Mr. Delaney and his committee are investigating. The problem of chemicals that are being added to foods alone is colossal. We literally do nothing in that field because, again, of lack of facilities, men, and funds to do the job.

Mr. SCHWABE. In Atlanta you are still occupying a portion of the Veterans' Administration facilities.

Dr. SCHEELE. Yes, sir—rather large laboratories there. I don't know what the fate of those will be, particularly if war should come.

Mr. SCHWABE. I appreciate that.

Dr. SCHEELE. So we feel that we are giving you here a reasonable program from the standpoint of our own appraisal of relative needs. We have been keeping pressure in our own organization in the last year to economize. I think it can safely be said that the Public Health Service is doing more today with less people than it was several years ago. Everyone is having to work a little harder. We actually show a net decrease in total personnel in the Public Health Service. We are approximately 1,000 below our level of several years ago, and that means that we are working harder.

Mr. SCHWABE. I have visited a great many of these installations during the past year and I think that I have never seen quite as thorough a job being done as is being done by some of your installations. Of course, they vary as naturally they would, but in some of

the more important ones I have been very pleased with the progress they are making.

That is all, Mr. Chairman.

Mr. FOGARTY. Mr. Busbey.

COMMISSIONING MEDICAL OFFICERS FOR DUTY ABROAD

Mr. BUSBEY. Dr. Scheele, last year when you were before our committee, I brought to your attention the name of one of your employees that I did not think deserved the right to be in Government employment, and it is my understanding that shortly after this man's name was brought to your attention, you had him resign. For that I want to congratulate you.

It is necessary to follow through on the individual, though—because while that gets rid of him in your agency, it still makes him eligible for employment in other agencies of the Government. Last week I asked the Loyalty Review Board to take recognition of his case so that it could be properly flagged in the files of the Civil Service Commission so that he does not get employment in any other branch of our Government.

This summer I had quite an extensive trip in Europe and took advantage to visit some of your Public Health offices abroad. I am glad to report to you and the committee that generally I was very favorably impressed with the way the offices and the business of the offices was being conducted.

I would like to ask if you have difficulty in obtaining doctors to go abroad and take charge of these various United States Public Health Service installations?

Dr. SCHEELE. Well, we do not have difficulty because of our commissioning system which is like that of the Army, Navy, and Air Force. Our medical officers, like our other officers, come in, take their commissions with the understanding that they will serve anywhere, at any time that exigencies of the Service demand. So we have a ready means in that device for ordering folks into these posts abroad.

Looking at the problem from the standpoint of the individual's wishes, however, I would say that it is difficult to find the numbers of people willing to serve abroad whom we currently require in the programs you visited in Europe this summer and the increasing number that we require to staff the Technical Cooperation Administration health programs and the Mutual Security Administration, the old ECA, Economic Cooperation Assistance programs.

Most folks would prefer to stay here. They have families at home. Living conditions are often not comparable or ideal abroad. If they have children, they have the problem of schooling abroad. This obviously will be deficient in most places, although it wouldn't be in a city like Paris where there is a large American colony.

Mr. BUSBEY. Do you have a rotation system for these men similar to the Foreign Service? Do they stay at one post a certain number of years and then transfer to another foreign post?

Dr. SCHEELE. Our system is like that in general, except that we send them out on 2-year assignments, and then bring them back to the United States. We do not rotate them into another foreign assignment unless they want to say abroad. A few of our senior people, like Dr. Nelson, whom you met in Paris, who likes foreign work, have stayed in it. But unless the individual wants to stay on, we normally bring them back at the end of 2 years.

PROGRAM TO ENABLE DOCTORS ABROAD TO CONTINUE RESEARCH STUDIES

Mr. BUSBEY. I received the general impression that the practice of doctors stationed abroad was rather limited in the field of medicine. I am wondering if there was any provision while they are stationed at these posts where they could continue their study or do research along certain lines in connection with any medical institutions that might be available to them.

Dr. SCHEELE. Yes, sir; we have such plans now which we are hoping to follow through on. During the time that you were abroad, approximately that same time, we had a consultant who visited these stations and went over their problems in great detail. He worked with the consuls and others and with our men and found out how they felt about the work. One of the things we propose to do is to try to work out arrangements with the consular authorities so that they will have certain free time and can take advantage of the local training courses. Some of them are in communities that have prominent European universities and medical schools. In some instances they are near important hospitals where research is going on.

The difficulty, of course, may have been apparent to you. They are over there to do immigration medical examinations and to do the examinations of the displaced persons. The latter program will terminate about the end of next June, however. It has been necessary, at the times of the greatest pressure, at least, for them to be available during the entire regular working day because there were examinations to make every day. It is difficult when there is only a single man and he is away when a flow of people suddenly starts coming in. So it has been somewhat complicated.

If we had a bigger job to do, if we were in a situation where we had two men in each place, then it would be a little easier for one to spell the other and for them to have these added advantages. But I think we can do more than we have been doing. Dr. Masur, who is coming on a little later, will tell you something about that.

Mr. BUSBEY. I think that would have a tendency to help the morale of the men while they are abroad; I think the man, for the good of the service, is entitled to that.

MENTAL HEALTH INSTITUTE

I have had quite a number of letters from Chicago recently in regard to a grant of $12,000 to a Professor Winch at Northwestern University, as they put it, to do research work on the determination of what is love. Have you had anyone bring that to your attention, along with other grants that have been made?

Dr. SCHEELE. Yes, sir.

Mr. BUSBEY. I think technically you might call it the study of unconscious factors governing courtship and mate selection. I have been looking through the justifications and wondering just where grants of this kind would be located.

Dr. SCHEELE. That is under the Mental Health Institute. In the loose-leaf book it is on page 148. That is under the listing "Grants for Research and Training, I, Research Projects, $1,663,000." There is a breakdown of the item on page 149, the following page. The upper three-fourths of the page covers that broad program. That project is

parallel with the program we operate in the field of cancer and heart disease and dental disease and elsewhere.

METHOD OF ESTABLISHING GRANTS FOR RESEARCH PROJECTS

As you know, under the law we have a 12-man advisory council, people outside of Government—six professional people with competence in the technical field and six laymen with broad interest in public affairs. The council meets periodically, usually three or four times a year, for 2 days, sometimes for 3 days, and they review the various requests that comes to us from investigators, from universities and elsewhere, for support for their research.

In addition to their review, these projects have been screened by additional groups that we have who are even more specialized in certain areas than is the Council as a whole. We have groups covering the range of interests in 20 different categorical areas—endocrinology, microbiology, physiology, a number of other broad disciplines. Breaking it down in the mental field, there is the medical side, the side of psychology, psychiatric nursing and psychiatric social work. Those groups review these projects. The Council considers the recommendations of these other groups of consultants. They, in turn, evaluate the projects and they recommend to the Surgeon General of the Public Health Service that he approve the project or not approve the project.

Mr. BUSBEY. Who makes the recommendations?

Dr. SCHEELE. That is the National Advisory Mental Health Council. I am sorry to say I do not have a list of the Council members here, but I would like to furnish that to the committee so that you can see it.

Mr. BUSBEY. Mr. Chairman, I want to be on the floor at 12 o'clock, and it is now just 12 o'clock. Would you entertain a suggestion to adjourn?

Mr. FOGARTY. Certainly. We will adjourn until 1:30.

Dr. SCHEELE. Mr. Chairman, I wonder if I might be excused to come back on a little later than your opening time. Maj. Gen. Edgar Erskine Hume, whom you probably met, Mr. Schwabe, when you were in Japan, who was the UN surgeon and the surgeon of the Far East Command, died suddenly 3 days ago and I have consented to be a pallbearer at his funeral at 2 o'clock.

Mr. FOGARTY. That will be quite all right, Doctor.

AFTERNOON SESSION

Mr. FOGARTY. You may start where you left off, Dr. Scheele.

FUNCTION OF THE NATIONAL ADVISORY MENTAL HEALTH COUNCIL

Dr. SCHEELE. Mr. Chairman and members of the committee, I believe I just finished describing the National Advisory Mental Health Council and the study sections and their part in recommending the approval or disapproval or modification in the various requests that come to us for research grants.

I have here a list of the members of the National Advisory Mental Health Council which I would like to introduce into the record.

Mr. FOGARTY. We will put that in the record at this point.

(The information referred to follows:)

NATIONAL ADVISORY MENTAL HEALTH COUNCIL

Dr. Leonard A. Scheele, chairman, ex officio, Surgeon, General, United States Public Health Service.
Dr. Leo H. Bartemeier, associate professor, department of psychiatry, Wayne University, Detroit, Mich.; president, American Psychiatric Association (1951–52).
Mr. Barry Bingham, president and editor, the Courier-Journal and Louisville Times, Louisville, Ky.
Dr. Ward Darley, executive dean, Health Sciences, and Services; director, University of Colorado Medical Center, Denver, Colo.
Dr. Carlyle F. Jacobsen, executive dean for medical education, State University of New York, Albany, N. Y.
Dr. Hugh R. Leavell, professor of public health practice, Harvard School of Public Health, Boston, Mass.; chairman, executive committee, American Public Health Association.
Mrs. Florence Mahoney, member, board of governors, Menninger Foundation.
Dr. William Malamud, chairman, department of psychiatry, school of medicine, Boston University, Boston, Mass.
Mr. Ben May, businessman, Mobile, Ala.
Mr. Charles Schlaifer, president, Charles Schlaifer & Co., Inc., New York, N. Y.
Miss Mildred Scoville, executive associate, the Commonwealth Fund, New York, N. Y.
Dr. S. Bernard Wortis, chairman, department of psychiatry and neurology, New York University Medical College; director, psychiatric division, Bellevue Hospital, New York, N. Y.

EX OFFICIO MEMBERS

Dr. H. J. Tompkins, Chief, Psychiatry and Neurology Division, Veterans' Administration, Washington, D. C.; representative for Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration.
Col. John M. Caldwell, Jr., MC, Chief, Psychiatry and Neurology Consultants Division, Surgeon General's Office, Department of the Army, Washington, D. C., representative for chairman Armed Forces Medical Policy Council, Office of the Secretary of Defense.

LIAISON REPRESENTATIVES

Surgeon General of the Air Force:
Lt. Col. Carlos C. Alden, USAF (MC), Department of the Air Force, Headquarters, United States Air Force, Washington, D. C.
Surgeon General of the Army:
Col. John M. Caldwell, Jr. (MC) (see above).
Surgeon General of the Navy:
Rear Adm. B. Groesbeck, Jr. (MC) (USN), Assistant Chief, Bureau for Research and Medical Military Specialities, Bureau of Medicine and Surgery, Department of the Navy, Washington, D. C.

Dr. SCHEELE. Three members leave the Council each year and three new members are appointed, so that we get a staggered membership and change of people.

As you see, under the Council mechanism—and this is controlled by law—the Surgeon General cannot give a grant if the Council has not recommended that a grant be given. In other words, they have veto power. If they find the request is not a good one and recommend against it, the Surgeon General has no choice but to say "No." This is not an affair in which one individual handles the problem.

We have been giving periodic releases to the press at the end of the various Council sessions, because they wish to know what is going on in the program. We announce the grants that have been made in those releases, location, scientist, the amount of money, and the title.

Unfortunately, there are periodic sallies against some particular specialty in the whole field of medicine. This is not a new thing.

It has happened off and on in the course of history. You may all recall how, a long time back, when Maj. Walter Reed said that the yellow fever was transmitted by mosquitoes, he came into open ridicule, and no less a paper than the Washington Post editorialized vigorously against this utterly ridiculous theory of this upstart major who said that yellow fever was transmitted by mosquitoes.

PROBLEMS OF RESEARCH IN MENTAL HEALTH

Well, we find the same sort of thing these days when psychiatrists are the common butt of many people's jokes, and folks do try to find little stories that they can tell on them.

It is tragic, actually, because, in making fun of these serious things, sometimes folks do not actually see or care to see what really is going on.

The project you inquired about is the project of Dr. Robert W. Winch, of Northwestern University. He is a member of the staff of the College of Arts and Sciences there. While one factor in his study—referred to by the title "The Study of the Conscious and Unconscious Factors in Mate Selection"—has to do with how folks come to like each other sufficiently to get married, what it is which makes them a successful and happy family, that part is only a small facet of the study actually. This study is based on an effort to get at the so-called complementary relationships between people—what it is that makes some people able to get along and others unable to get along.

This has become a very important problem in industry. Today many of our major industries are bringing in experts to study their interpersonal relations problems. Why is it that in one department under a particular supervisor the work output is at a certain level, the spoilage is at a certain level, and maybe in the next room, where there is another supervisor with the same kind of a group and the same kind of operation, the output is much higher and the spoilage is far less? We find that this usually is related to the relationship between the supervisor—the boss of that group—and his people.

We have many problems in the field of interpersonal relations even in our military services where we are putting men in close proximity to each other.

Accordingly, it seemed appropriate to the various members of the Council and to the advisory groups who had reviewed this particular project before it was approved that a study of the complementary needs of people would and might furnish some background on these elusive problems of interpersonal relations. And so they recommended that we approve that project, and we did.

Actually, of course, the problems in our mental-health program are not unlike those in other research programs. In cancer we study a vast range of problems. We study biochemistry, biophysics, genetic problems, a whole host of problems—clinical applications of surgery and X-ray and the things we talked about this morning. And so in mental health our approach is also a broad approach, trying to get at every little facet we can, because one never knows which one of these things may bring us the answers to the problems.

This project is not going to bring us major answers in solving all of man's major illnesses. That we know. On the other hand, when one considers the fact that we have about 550,000 people in mental

hospitals and that they occupy half the Nation's hospital beds and cost well over half a billion dollars to the taxpayers just to house them, we can see that even partial answers may be of value. We must have a broad program.

EFFECT OF MENTAL ILLNESS ON NATIONAL WELFARE

In terms of productivity, the mental illnesses of these persons accounts for a loss of something like 124,000,000 man-days a year. Out of almost 2,000,000 persons in veterans' hospitals in 1949, about one-fourth were neuropsychiatric patients. In that year the Veterans' Administration paid out $23,000,000 per month for neuropsychiatric disabilities out of total pensions of about $85,000,000 per month, and that did not include the cost of operating beds for mental patients in Veterans' Administration hospitals.

In any day of the year we estimate there are about 6 percent of our population, or 9,000,000 persons, who need mental-health services of one kind or another. Doctors report that about 60 percent of the patients that come into their offices have emotional problems as part of their illness.

At least 275,000 boys and girls are brought into our courts as delinquents every year. Our two Federal drug-addiction hospitals admit almost 5,000 patients each year. About three-quarters of a million persons drink to such a degree that their physical or mental health is being impaired. That is a psychiatric problem.

I might mention with regard to the delinquent children that we often find that the home situation has been a major facor in their going over the line and becoming delinquents. This also applies to the youngsters who have become narcotic addicts.

Again I say that, in view of this tremendous problem, the approach the Congress made in creating the Mental Health Institute and setting up a broad program of research, the same kinds of aid across a broad spectrum of research problems in institutions outside the Public Health Service as in our own program in our Mental Health Institute, was a worthy approach to this tremendous and costly problem.

That study by Winch at Northwestern University that started the fun poking, so to speak, at the program is just one of many very serious efforts under way in our country at trying to put together little bits of the puzzle of mental illness.

PURPOSE OF THE STUDY ON FACTORS GOVERNING COURTSHIP AND MATE SELECTION

Mr. BUSBEY. Well, Doctor, I do not know whether they are justified in this so-called fun-poking episode you speak about or not. But I think that we on the committee certainly have a right to explore it and to ascertain to the best of our ability whether or not it is worth while.

Now, getting back to this study of the unconscious factors governing courtship and mate selection, if they find out a certain thing, what effect is that going to have on people getting married or anything else in the mental-health field? In other words, what are they driving at? What do they hope to obtain from such a study as this? I frankly admit that I do not know. I am trying to learn.

Dr. SCHEELE. Yes, sir. Well, I am very glad that you raised the question in the first place because we are happy to have a chance to talk about it.

Mr. BUSBEY. Well, there are some others I want to raise a question on. This is not the only one.

Dr. SCHEELE. The thing that Dr. Winch hopes to get, and that everybody who is interested in the broad research program in psychiatry hopes to get, is some better understanding of what it is that makes people get along or not get along. Our long-range hope is that we will find some technique for overcoming that. If we can find that certain situations lead to family problems and those family problems lead to juvenile delinquency problems, it may be possible that we can break that chain reaction.

In the field of counseling of individuals, like that which is being done by marriage counselors, the clergy, and others, if they can better understand in advance certain things which may cause difficulties later, they may, in their counseling of youngsters, be able to tell them to look carefully and be engaged a little longer before taking the step, and that sort of thing. In other words, some value can come out of it in terms of better relationships between husbands and wives.

Now, beyond that it is worth while to get things which may be carried over to other places. We think that there can be some things that will have some value here in industry. We believe that it is possible this project may give us a series of findings which can give us an index of how you can make people work together better as a team.

The military services, interestingly enough, are, as they should appropriately be, very much interested in this sort of thing. They are very much interested in problems they have in submarine crews, men who are going to have to live close together.

Mr. BUSBEY. You mean in the problem of what love is?

Dr. SCHEELE. In the problem of interpersonal relations; yes, sir. It happens that Dr. Winch has selected as his study material married people, even as in another instance somebody uses a mouse or a test tube and chemicals.

Mr. SCHWABE. To see whether or not there is a malady there; is that it?

Dr. SCHEELE. Yes, sir. It is to find a malady, to be sure, but it is to study the factors that are involved in this thing which is called complementary needs.

Mr. BUSBEY. Well, Doctor, personally do you not think human nature in itself enters into a lot of this?

Dr. SCHEELE. That is what they are studying.

Mr. BUSBEY. Take a factory, for instance. Here is one supervisor who can get along with men, and here is another supervisor who cannot. It is up to management to get rid of the supervisor who cannot get along with men and pull in another one and train him for that position. Some people are easy to get along with, and some people are hard to get along with.

Now, I am hard to get along with. As Socrates once said, "Know thyself." I know I am hard to get along with.

Dr. SCHEELE. It is not anticipated that Dr. Winch is going to revolutionize marriage and the happiness of people. In industry it is true that you can eliminate this particular foreman and try to get another

foreman. However, it may be that that foreman can be trained, if he just knew what it was that folks did not like, and could still be valuable. All of our large industries today have actual training programs for their executives right on down to the bottom of the line, because they have found that it pays off. Instead of waiting until things blow up and then trying to fire someone, they try to do their work on a sort of preventive basis, which is what we are trying to achieve in mental health—to keep these people from having the crack-up. Even as it is, I would think personally that studying the factors in mate selection might have some——

Mr. BUSBEY. These are the unconscious factors.

Dr. SCHEELE. Conscious, too. You see, the newspapers did not use the whole title of the project. We have such a large number of marriages which go on the rocks, separations or divorces, that it is a very large problem by itself. The Public Health Service and the Mental Health Institute, I am sure, are not interested in the world's morals. That is not the point at all. If I may, I would like to say something off the record.

(Discussion off the record.)

Mr. BUSBEY. How long has this National Advisory Mental Health Council been in existence, Doctor?

Dr. SCHEELE. Since 1947.

NUMBER OF GRANT PROJECTS

Mr. BUSBEY. And how many projects were approved for the fiscal year 1952?

Dr. SCHEELE. Dr. Sebrell, do you have that? A little later you will have Dr. Felix here, and he will have detailed information.

Mr. HARLOW. There are 122 listed in the justification.

Mr. BUSBEY. One hundred and twenty-two projects?

Mr. HARLOW. Yes, sir.

Mr. BUSBEY. Dr. Scheele, with the consent and approval of the chairman of the committee, would it be possible to furnish for the record a list of those projects and to whom they were assigned and the amount of money appropriated to them?

Dr. SCHEELE. Yes, sir; we would be very happy to do that. It is a matter of record in Public Health Service Reports, one of our publications. This is public information.

(The information referred to follows:)

NATIONAL INSTITUTE OF MENTAL HEALTH—RESEARCH GRANTS ACTIVE IN FISCAL 1952[1]

MH–6 Environmental influence on the behavior of school-age children. Dr. Roger G. Barker (University of Kansas, Lawrence, Kans.), $14,824. A study of the total environment of the child in a small town, to find the range of influences on behavior and how they affect personality development.

MH–10 Personality characteristics of eminent scientists. Dr. Anne Roe (New York, N. Y.). $7,914. A study by psychological tests and clinical interviews of the life histories and personality characteristics of outstanding physicists, biologists, psychologists, and anthropologists.

[1] This list includes the 106 research grants active so far in 1952. Additional grants will be made after the February and June 1952 meetings of the National Advisory Mental Health Council.

MH–14 The psychopathology of schizophrenia and depressions. Dr. P. E. Huston, (State University of Iowa, Iowa City, Iowa). $6,600. The nature of thinking, memory, and affect in the mental illnesses, schizophrenia and depression.

MH–22 A study of the relationships between emotional tension and carbohydrate metabolism in diabetic patients. Drs. Franz Alexander and Thomas M. French (Chicago Institute for Psychoanalysis, Chicago, Ill.). $10,584. Parallel physiologic and long-term psychoanalytic investigations into the causes and mechanisms by which emotional tension increases metabolic disturbances.

MH–23 A study of the psychosomatic aspects of atrophic arthritis. Drs. Franz Alexander and Thomas M. French (Chicago Institute for Psychoanalysis, Chicago, Ill.). $11,448. Psychoanalytic and electromyographic studies on arthritic patients to discover the relationship between emotional tension states and muscle tonus and to learn of the role of personality in this disease.

MH–24 An investigation of psychogenic factors in the etiology of nonspecific ulcerative colitis. Dr. Franz Alexander and Thomas S. French (Chicago Institute for Psychoanalysis, Chicago, Ill.). $8,812. An intensive psychoanalytic study to learn the cause and specific dynamic factors underlying commonly observed personality problems in patients with ulcerative colitis.

MH–25 A clinical study of the relations of perceptual functioning to personality organization. Dr. George S. Klein (Menninger Foundation, Topeka, Kans.). $9,650. A laboratory and clinical study of individual differences in visual and auditory perception, the relation of these differences to personality, and the influence of emotion on perception.

MH–37 Nonverbal communication in psychotherapy. Drs. Karl M. Bowman and Jurgen Ruesch (University of California, Berkeley, Calif.). $13,392. The development of methods to improve the psychotherapeutic process using modern concepts of communication theory.

MH–39 The study and treatment of preschool children with severe psychiatric disturbances. Dr. Marian C. Putnam and Mrs. Beata Rank (the James Jackson Putnam Children's Center, Boston, Mass.). $31,338. An intensive psychiatric study of very young children with severe emotional and personality disorders, and the development of effective methods of treatment.

MH–41 Conditioned response studies of the relation of aging to tolerance for environmental stress. Drs. H. S. Liddell and C. M. McCoy (Cornell University, Ithaca, N. Y.). $28,638. A study by the conditioned response method of the development of chronic behavior abnormalities, similar to human neurotic behavior, in sheep and goats, and of the relation of age, nutrition, and thyroid and adrenal hormones to such pathology.

MH–57 An evaluation of marriage counseling. Drs. E. H. Mudd and W. L. Peltz (Marriage Council of Philadelphia, Philadelphia, Pa.). $17,200. A study of marriage counseling as a professional service designed to contribute to constructive marriage relationships and to mental health.

MH–58 Development of improved diagnostic and prognostic tests for use in psychiatry. Dr. Nolan D. C. Lewis (New York State Psychiatric Institute, New York, N. Y.). $14,000. A study to develop new psychological aids to improve diagnosis and prognostic criteria in evaluating psychiatric patients.

MH–63 Prediction of psychosis in children by means of the Rorschach test. Dr. S. J. Beck (Michael Reese Hospital, Chicago, Ill.). $8,618. A follow-up study and retesting of persons previously tested during childhood and in whom psychosis was predicted, to refine and validate further the Rorschach test.

MH–64 Use of the Rorschach test in diagnosing schizophrenia. Dr. S. J. Beck (Michael Reese Hospital, Chicago, Ill.). $8,618. The development and refinement of a psychological test for the diagnosis and differentiation of various types of schizophrenia in adults.

MH–65 A study to demonstrate the interrelationship between changes in the autonomic nervous system, emotion, and certain cutaneous reactions in normal and pathologic skin. Dr. Roy R. Grinker (Michael

Reese Hospital, Chicago, Ill.). $7,020. With induction of various emotional states, aggravation or remission of skin diseases will be studied, utilizing psychiatric interviews, psychological tests, and physiological measurements of changes in the skin.

MH–66 Psychosomatic disorders in children. Drs. Allen M. Butler and Stanley Cobb (Massachusetts General Hospital, Boston, Mass.). $16,520. A study of the psychiatric, endocrine, and nutritional factors causing abnormal growth and development of children.

MH–79 Personality development from birth to maturity. Dr. Jean Walker Macfarlane (University of California, Berkeley, Calif.). $30,283. A comprehensive, long-term study of the physical, intellectual, and emotional growth of normal children.

MH–80 The relation of hereditary and environmental circumstances to children's personality factor measures. Dr. Raymond B. Cattell (University of Illinois, Urbana, Ill.). $15,500. An analysis, using the factor analysis method, of the effect of hereditary and environmental influences on 12 primary factors in children's personalities.

MH–81 A study of institutional treatment of emotionally disturbed children. Dr. Bruno Bettelheim (University of Chicago, Chicago, Ill.). $15,660. Analysis of the integration of institutional treatment and individual therapy for children with severe functional behavior disturbances.

MH–105 Mental health effects of newborn infants "rooming-in" with mothers during hospital stay. Dr. Edith B. Jackson (Yale University, New Haven, Conn.). $37,047. A study of the effects upon mother and child of having the newborn infant "room-in" with the mother for the duration of the hospital stay.

MH–110 A psychiatric study of dependency. Dr. A. Warren Stearns (Tufts Medical College, Medford, Mass.). $7,000. A study of the role which heredity, environment, and psychiatric disorders (such as alcoholism) play in individuals who have become inmates of poorhouses or houses of correction.

MH–120 The effect of fear and anxiety on imagination, memory, and performance. Dr. David C. McClelland (Wesleyan University, Middletown, Conn.). $2,484. A laboratory study of the effect of experimentally induced fear and anxiety on thinking, and on other psychological processes.

MH–123 Study of the interaction of social and hereditary factors affecting neuroses and nervous instability. Dr. J. P. Scott (R. B. Jackson Memorial Laboratory, Bar Harbor, Maine). $9,288. Experimental study of the influence of heredity and environment on the development of fighting and imitative behavior in animals, and of the age period at which stress most markedly affects behavior.

MH–139 Changes in perceptual functions in organic psychoses. Dr. Morris B. Bender (New York University College of Medcine, New York, N. Y.). $4,698. Psychophysiological, neurological, and psychiatric studies of changes in vision, audition, pain perception, etc., following lesions of the nervous system and in nonorganic conditions such as hysterical anesthesia, amnesia, hallucinosis, etc.

MH–142 Factors influencing the development of conditioned fear responses. Drs. Judson S. Brown and I. E. Farber (State University of Iowa, Iowa City, Iowa). $4,536. A laboratory study involving development of conditioned fear responses in human and animal subjects, with analysis of the intensity of the fear, its susceptibility to extinction, and its effects on behavior.

MH–148 Analysis of psychological functioning in schizophrenia. Dr. David Shakow (University of Illinois College of Medicine, Chicago, Ill.). $7,326. A study of sensation, perception, motor function, memory, learning, intelligence, and personality structure in schizophrenic patients.

MH–156 Psychological and anthropological analyses of autobiographies of displaced persons. Dr. David P. Boder (Illinois Institute of Technology, Chicago, Ill.). $6,000. Analysis of 80 autobiographies of displaced persons recorded verbatim in DP camps in 1946 to determine the psychological effects of severe emotional deprivation and trauma.

MH–161 A study of cerebral function before, during, and after excision of portions of the frontal lobes. Drs. William H. Sweet and Stanley Cobb (Massachusetts General Hospital, Boston, Mass.). $26,208. The function of the cerebral lobes of the brain as determined by studies of brain-operated patients who are not mentally ill.

MH–163 The use of hypnosis in psychotherapy and the nature of the hypnotic state. Dr. Margaret Brenman (the Austin Riggs Foundation, Stockbridge, Mass.). $13,145. Studies of hypnotizability in various types of individuals, the nature of psychological and physiological correlates of the hypnotic state, and the clinical applicability of hypnosis in psychotherapy.

MH–165 Diagnostic and prognostic significance of prodromal factors in mental illness. Dr. Phyllis Wittman (Elgin State Hospital, Elgin, Ill.). $1,200. An attempt to develop criteria for determining whether a child will develop mental illness in later life, through analysis of childhood records of persons now mentally ill.

MH–166 The validity of vocational tests in predicting the efficiency of mental hospital attendants. Dr. Phyllis Wittman (Elgin State Hospital, Elgin, Ill.). $3,600. The development of a useful series of tests to assist in the selection of qualified psychiatric attendants in mental hospitals.

MH–171 A study of schizophrenia in children. Dr. Lauretta Bender (New York University, New York, N. Y.). $22,896. A study of the etiology, symptomatology, diagnosis, and treatment of childhood schizophrenia by psychiatric, neurological, physiological, and psychological methods, and the evaluation and development of various types of psychotherapy and shock therapy.

MH–174 The psychosomatic aspects of ulcerative colitis. Dr. George E. Daniels (Columbia University, New York, N. Y.). $13,500. Psychiatric study of patients in conjunction with physiological studies of the colon, rectum, and anal sphincter.

MH–188 Determination of discharge rates and mortality rates for patients admitted to the New York Civil State Hospitals. Dr. Benjamin Malzberg (New York State Department of Mental Hygiene, Albany, N. Y.). $7,000. Analysis of hospital records to show, separately for the major groups of mental disorders and for men and women, rates on a life table basis for discharge from the hospital and for death after admission.

MH–196 Survey of laws governing administration of mental institutions. Mr. Raymond G. Fuller (National Association for Mental Health, Inc., New York, N. Y.). $16,011. Survey and analysis of laws and administrative regulations governing administration of mental hospitals and mental health programs, and evaluation of the effectiveness of various approaches to this problem.

MH–201 Psychological problems associated with facial deformities and plastic surgery. Dr. John M. Converse (New York University College of Medicine, New York, N. Y.). $14,029. The psychological problems created by facial deformities, their relation to other problems of psychological adjustment, the psychiatric hazards of long-term plastic surgery, and the development of techniques for handling these problems.

MH–208 Sibling rivalry as a psychological hazard. Dr. Frances G. Orr (Stanford University, Stanford, Calif.). $8,044. Rivalry between children of the same parents (siblings) is sometimes seriously disturbing, resulting in feeding difficulties, overaggressiveness and hostility, withdrawal from competitive situations, etc. This study is to discover the factors which give rise to this rivalry and why it is disturbing to some children and not to others.

MH–211 The adjustment problems of children born during the war. Dr. Lois Meek Stolz (Stanford University, Stanford, Calif.). $4,352. Study of the effect on child emotional adjustment and personality stability of the absence of the father in the Armed Forces at the time of birth, and comparison with children whose fathers were home at birth and during early childhood.

MH–213 Personality study of a group of young concentration camp survivors. Dr. Jacob Goldstein (Graduate Faculty of Political and Social Science, New School for Social Research, New York, N. Y.). $5,400. To investigate the effects of concentration camp experience on personality by means of interviews and psychological tests.

MH–215 Development of methods for selecting psychologically qualified candidates for teacher training. Dr. Barbara Biber (Bank Street College of Education, New York, N. Y.). $10,000. The development and evaluation of a test to aid in selecting individuals who are psychologically as well as educationally qualified to teach children.

MH–226 The relationship between personality structure and expressive movements. Dr. Mitchell A. Gold (Scientific Personality Reseach Corporation, New York, N. Y.). $10,000. Study of physiological responses and expressive movements as related to personality patterns, emotional states, and the threshold of pain.

MH–245 A study of the effect of prefrontal lobotomy on cerebral function. Dr. Harry C. Solomon (Harvard University Medical School, Boston, Mass.). $11,203. Use of brain-operated patients to determine function of cerebral lobes in man. Comparison of various types of psychosurgery.

MH–255 Cultural and psychiatric factors in the mental health of the Hutterites. Dr. Joseph W. Eaton (Wayne University, Detroit, Mich.). $7,474. A study of the incidence of mental illnesses among a small, deeply religious group in the Dakotas and Canada, who are thought to show fewer such disorders than the population at large. The study also aims at discovering which environmental factors are related to the occurrence of such disorders.

MH–263 Relationships of social structure to psychiatric disorders. Drs. F. C. Redlich and A. B. Hollingshead (Yale University School of Medicine, New Haven, Conn.). $25,758. A study to test the hypothesis that there is a relationship between the incidence of psychiatric disorders and the nature of the life stresses that individuals face in different strata of urban society. A complete census of the psychiatric population of New Haven is the first step.

MH–274 A preschool project for young mentally handicapped children. Dr. Samuel A. Kirk (University of Illinois, Urbana, Ill.). $28,910. A determination of the effectiveness of a specialized educational preschool program on the mental and social development and acceleration of young mentally handicapped children.

MH–289 Research conference on psychosurgery. Dr. Fred A. Mettler (Columbia University, New York, N. Y.), $4,660. A series of three conferences in which research scientists and physicians in the fields of neurosurgery, psychiatry, psychology, physiology, and biometrics analyzed the therapeutic value of brain surgery for the relief of severe mental illnesses.

MH–295 A quantitative study of the enzymatic histochemistry of the cerebral cortex in psychotic and nonpsychotic patients. Dr. Alfred Pope (Massachusetts General Hospital, Boston, Mass.). $3,780. The function of enzymes in the central nervous system and their role in mental illness.

MH–301 The effects of a teaching program in human behavior and emotional development on children of different age levels and backgrounds. Dr. Ralph H. Ojemann (State University of Iowa, Iowa City, Iowa). $23,432. An evaluation of the effectiveness of a program of preventive psychiatry at elementary and secondary school levels.

MH–305 A follow-up study of psychosurgical patients. Dr. Archie Crandell (the New Jersey State Hospital, Greystone Park, N. J.). $9,535. Evaluation of the postoperative social adjustment of psychosurgical patients in relationship to a carefully studied environmental situation.

MH–312 Conditioned response studies of the relation of anxiety to behavior disorders. Dr. Kenneth W. Spence (State University of Iowa, Iowa City, Iowa). $5,778. A study of the relation of the ability to control anxiety to the development of hysteria, compulsion neurosis, anxiety neurosis, and other disorders.

MH–313 The psychodynamic role of the clinical investigator in studies on measurable physiologic and clinical responses of the patient with hypertension. Drs. Eugene B. Ferris, Jr., and Morton F. Reiser (University of Cincinnati College of Medicine, Cincinnati, Ohio). $12,636. Investigations to determine the effects of specific emotional states of the investigator on the psychological and physiological responses of the patient.

MH–316 The influence of early environment on behavior and neurosis. Dr. Roger E. Watson (the Institute of the Pennsylvania Hospital, Philadelphia, Pa). $1,000. Study of the effect of drastically modifying the feeding situation of young cats on their susceptibility to experimental neurosis as adults.

MH–318 Studies on the relationship of metabolism and function in the brain. Drs. Jacob E. Finesinger and Robert G. Grenell (University of Maryland School of Medicine, Baltimore, Md). $7,560. The biochemical and the electrical activity in the brain and their relation to mental illness.

MH–320 A study of the role of emotional factors in idiopathic celiac disease. Dr. Charles A. Janeway (the Children's Hospital, Boston, Mass.). $10,260. Psychologic and physiological studies of children with idiopathic celiac disease and psychologic studies of their mothers, with correlated effects of psychiatric treatment.

MH–323 Psychological sources of resistance to the effects of social stress. Dr. John H. Useem (Michigan State College, East Lansing, Mich.). $23,463. A study to determine the techniques and resources which enable people to successfully handle those problems which stem from the complexities and conflicting demands of modern life.

MH–325 The study and development of methods for coordinating community mental health programs. Dr. Alvin Zander (University of Michigan, Ann Arbor, Mich.). $31,568. A study of factors which help or hinder the effectiveness of preventive mental health programs and the development of methods for improving and coordinating such programs.

MH–326 Intellectual and other personality factors as determinants of I. Q. changes under a program of individual therapy and instruction. Dr. George E. Copple (Vanderbilt University, Nashville, Tenn.). $10,435. Study of the value of two alternative methods of increasing I. Q.'s of mentally retarded children.

MH–327 Psychodynamics of the individual with potential diabetes mellitus. Dr. I. Arthur Mirsky (the May Institute for Medical Research of the Jewish Hospital, Cincinnati, Ohio). $7,884. Studies of psychological characteristics of individuals in a potentially diabetic group before metabolic aberrations are noted as compared with individuals who actually become diabetic.

MH–331 A study of the role of leadership and the function of the group in group psychotherapy. Dr. Saxton Pope (University of California, Berkeley, Calif.). $10,032. Analysis of group-leadership characteristics and a study of varying interactions among group members when the composition of the group varies with respect to age, sex, socio-economic status, and personality type.

MH–339 Standardization of Oseretsky tests of motor proficiency. Mr. William Sloan (Lincoln State School and Colony, Lincoln, Ill.). $2,500. The application of the Oseretsky tests of motor proficiency to various groups of children in order to refine and standardize this test of performance.

MH–342 Studies in vocational guidance. Dr. Leonard Small (Vocational Advisory Service, New York, N. Y.). $23,221. Investigation of personality needs as they affect vocational choice and as they affect school and work performances among students in training for technical, semiprofessional, and business occupations.

MH–348 Basic psychological mechanisms underlying perception-personality relationships. Drs. Heinz Werner and Seymour Wapner (Clark University, Worcester, Mass.). $20,736. The relation of muscular tonus and other intraorganic factors to vision, audition, electrical stimulation of muscles, and personality.

MH–359 Effects of cerebral lesions on learning and reintegration processes. Dr. Harlow W. Ades (Emory University, Georgia). $11,016. The effect of brain lesions on memory and ability to learn, using conditioned response and electrical-recording methods.

MH–362 Effect of anoxia on psychological functions. Dr. Marion E. Bunch (Washington University, St. Louis, Mo.). $2,160. The effect of oxygen deprivation on learning, memory, and motivation.

MH–366 A study of the effects of electroshock therapy during the administration of cortisone or ACTH to schizophrenic men. Dr. Hudson Hoagland (Worcester Foundation for Experimental Biology, Shrewsbury, Mass.). $4,050. Study of psychiatric status and nature of response in patients previously resistant to electroshock therapy when such therapy is given following administration of cortisone and ACTH.

MH–372 Study of central pain conduction and of the emotional reactions associated with pain perception. Dr. Ernest Spiegel (Temple University, Philadelphia, Pa.). $6,000. The anatomical and physiological basis of pain perception and its relations to emotion, using electrical and histological methods.

MH–373 The relationship of menstruation to the occurrence of seizures in epileptic women. Drs. Bernard Bandler, I. Charles Kaufman, and William Malamud (Boston University School of Medicine, Boston, Mass.). $25,495. Correlation of physiological, biochemical, and biophysical studies of the menstrual cycle and its relation to the occurrence of seizures and the patients' psychological reactions.

MH–375 Hereditary factors in convulsions and related behavior disorders. Dr. Lee R. Dice (University of Michigan, Ann Arbor, Mich.). $8,640. The role of heredity in determining convulsive reactions to auditory and chemical stimuli.

MH–376 The effects of electroconvulsive shock on the retention of habits and fixations. Drs. Claude C. Nees and Robert S. Feldman (University of Massachusetts, Amherst, Mass.). $2,000. Laboratory study using technique similar to electroshock therapy to determine its effects on retention of habits and maladaptive fixations in the rat.

MH–382 Preventive mental hygiene for later maturity. Drs. Jack M. Weinberg and Robert J. Havighurst (the University of Chicago, Chicago, Ill.). $19,656. Psychiatric study of normally functioning individuals in their late fifties and early sixties to learn of the psychological aspects of the aging process, and to formulate mental hygiene procedures for persons facing retirement and old age.

MH–383 Exploratory study in the effects of stressful infantile experiences upon adult emotional behavior. Dr. Philip F. D. Seitz (Indiana University School of Medicine, Indianapolis, Ind.). $7,949. Comparison of adult emotional behavior in groups of rats which experienced varied and intense stresses in the first 3 weeks of life.

MH–385 The relation of temporal lobe suppressor regions and psychomotor epilepsy. Dr. Francis M. Forster (Georgetown University School of Medicine, Washington, D. C.) $11,825. Investigation of the possible relation of abnormal electrical activity in the temporal region of the brain to psychomotor epilepsy.

MH–388 Electron microscope analysis of the central nervous system under normal and experimental conditions. Dr. J. Francis Hartman (University of Minnesota, Minneapolis, Minn.). $8,717. A study of the normal and pathological structure of the central nervous system, using the electron microscope.

MH–389 An investigation into the effect of sensory impulses on the cortical motor system with special emphasis on the visual and vestibular systems. Dr. Patrick D. Wall (University of Chicago, Chicago, Ill.). $3,915. The anatomical and physiological basis of sensation in the central nervous system.

MH–393 The metabolic fate of N-substituted derivatives of barbituric acid and hydantoin. Dr. Thomas C. Butler (University of North Carolina, Chapel Hill, N. C.). $5,000. A pharmacological study of antiepileptic agents.

MH–402 Study of the validity of psychological tests in the diagnosis of mental illness. Dr. Neil D. Warren (University of Southern California, Los Angeles, Calif.). $9,400. An attempt to analyze and refine further the prediction and diagnostic values of psychological tests.

MH–403 Person and situation as determinants of constructive community behavior. Dr. Urie Bronfenbrenner (Cornell University, Ithaca, N. Y.). $16,632. A study by observation, interview, and testing of 200 community residents who exhibit differing degrees and types of participation in community affairs, to discover factors related to healthy, constructive contribution to community life. This is a study of the factors related to one aspect of mental health, rather than mental illness.

M–409 The effect of age interval between siblings upon their personality and social attitudes. Dr. Helen L. Koch (University of Chicago, Chicago, Ill.). $6,843. A systematic psychological study of the effect on personality of such factors as rivalry, jealousy, and competition between children to test the many theories of the importance of these relationships.

MH–419 Research conference on the Effects of Early Experience on Mental Health. Dr. J. P. Scott (R. B. Jackson Memorial Laboratory, Bar Harbor, Maine). $3,500. A conference of outstanding psychiatrists, physiologists, and psychologists to analyze available data on the effects of early experience on mental health and to plan further research on this important problem.

MH–422 A quantitative comparison of two types of psychotherapy. Dr. O. Hobart Mowrer (University of Illinois, Urbana, Ill.). $13,228. Quantitative studies of the similarities and differences between two different types of psychotherapy; purpose is to formulate a more precise theory of therapy.

MH–425 An evaluation of group psychotherapy for hospitalized mentally ill patients. Dr. Willis H. McCann and William H. Cadman (University of Kansas City, Kansas City, Mo.). $19,635. Psychiatric and psychologic evaluation of individual and group performances of hospitalized mentally ill patients before, during, and following group psychotherapy.

MH–434 The effect of aging upon the central nervous system. Dr. Ewald W. Busse (University of Colorado Medical Center, Denver, Colo.). $7,532. Study, utilizing the electroencephalogram, flicker fusion, laboratory tests, and psychological measures, of healthy older persons as compared with senile and arteriosclerotic patients.

MH–437 Analysis of factors related to psychological rigidity. Dr. Emory L. Cowen (University of Rochester, Rochester, N. Y.). $3,974. Rigidity is lack of adaptability to demands of the situation. This study investigates the relation of rigidity to emotional adjustment, to threat, and to attitudes toward self.

MH–439 A study of the theory of complementary needs. Dr. Robert F. Winch Northwestern University, Evanston, Ill.). $12,096. A study of motives and how to determine their presence, strength, directness of action, and effects on relations with others, using as subjects young married couples, with primary concern for study of motives involved in selection of mates.

M–449 A study of electroencephalographic (EEG) phase relationships and their physiological, neurological, psychological and psychiatric significance. Dr. Chester W. Darrow (Institute for Juvenile Research, Chicago, Ill.). $4,700. A correlation between electroencephalographic phenomena and various physiological, neurological, psychological and psychiatric states.

M–450 An experimental study of techniques for changing the group acceptance and social adjustment of maladjusted members in classroom and camp groups of children. Dr. Ronald Lippitt (regents of the University of Michigan, Ann Arbor, Mich.). $18,252. The development and application of individual and group techniques to modify camp and classroom groups so as to provide greater acceptance of maladjusted members of groups of children.

M–451 Study of adrenocortical function in schizophrenia. Dr. Leo T. Samuels and Dr. C. H. Hardin Branch (University of Utah, Salt Lake City, Utah). $9,886. Biochemical studies of the activity of the adrenal cortex in schizophrenia, and the effect of electroshock and psychological stress on adrenocortical activity.

M–453 Cultural components in attitudes toward pain. Dr. Mark Zborowski (Institute for Intercultural Studies, New York, N. Y.). $7,766. A study to test the hypothesis that human reactions to pain are influenced not only by its physiological character, but also by the concept of pain prevalent in the society, and therefore may vary with each culture.

M–454 A study of the adjustment and acceptance of individuals in groups. Dr. Ben Willerman (University of Minnesota, Minneapolis, Minn.). $16,293. A study of the adjustment and acceptance of individuals in groups and evaluation of techniques for increasing self-assurance and feelings of security through individual counseling and group therapy.

M–458 Community factors affecting the degree of mental health of workers in a defense production community. Dr. Marie Jahoda (New York University, New York, N. Y.). $27,864. A study of a small-sized community into which defense production workers have recently migrated, in order to identify those community factors which increase or decrease the degree of mental health of the new migrants and their families.

M–460 Factors affecting the mental health of workers in mass-production industry. Dr. Arthur Kornhauser (Wayne University, Detroit, Mich.). $19,458. A study of the occurrence of psychoneurotic symptoms and emotional difficulties among workers engaged in routine production jobs, as compared with persons employed in other types of work.

M–461 The relation of child-rearing practices to personality development of young children. Dr. Robert R. Sears (Harvard University, Cambridge, Mass.). $45,915. A large-scale study to compare effects on child personality and emotional adjustment of different methods of rearing children.

M–462 An empirical study of the relation of personality to social adjustment. Dr. Harrison G. Gough (University of California, Berkeley, Calif.). $8,140. A study to develop valid and reliable measuring devices for such normal personality traits as social responsibility, dominance, intellectual efficiency, intolerance, etc.

M–463 An analysis of the peyote cult as a social movement among the Navajo Indians. Dr. David F. Aberle (Johns Hopkins University, Baltimore, Md.). $2,376. A study of the relation of social tension to spread of the Indian religious movement in which use of the drug peyote (related to mescal) is an important part of the ritual.

M–467 The relation of social adjustment to psychological and adrenal cortical reactions to stress. Dr. Leslie Phillips (Worcester Foundation for Experimental Biology, Shrewsbury, Mass.). $15,714. Study of social adjustment in healthy and mentally ill people to test the tentative findings that adrenal cortical response to ACTH is closely related to such adjustment.

M–469 Causes of variation in child adjustment over a period of years. Dr. T. W. Richards (Northwestern University, Evanston, Ill.). $3,844. A long-term study, using unique data from the Fels Institute, to determine the persistence of maladjustment and the stability of good adjustment in individual children.

M–473 A psychosomatic study of blood-pressure elevation in normal, hypertensive, and depressed-psychotic individuals. Dr. Daniel H. Funkenstein (Boston Psychopathic Hospital, Boston, Mass.). $600. Studies of blood-pressure physiology and personality structure in depressed psychotic individuals compared with normal and hypertensive individuals.

M–476 Therapeutic effect of improvement in staff selection, training, and administration in psychiatric institutions for children. Dr. Bruno Bettleheim (Sonia Shankman Orthogenic School, University of Chicago, Chicago, Ill.). $11,664. Improvement of methods of caring for and treating psychiatrically disturbed children in institutions by means of improvement in selection of specialized staff required.

M-477 Psychodynamics of experimental asthma in man. Dr. Harold A. Abramson (Mount Sinai Hospital, New York, N. Y.). $11,448. Study of the relationship of emotional conflicts to the production and prevention of asthma, utilizing pharmacologically active drugs, allergens, and correlated psychological methods.

M-479 Genetic factors in the aging process and in mental illness. Dr. Franz J. Kallman (New York State Psychiatric Institute, New York, N. Y.). $11,661. A study of the life histories of 876 pairs of twins ranging in age from 61 to 96 years, with primary emphasis on general health, emotional adjustment, intellectual performance, cholesterol metabolism, length of life, and development of a mental disorder.

M-484 Effect of social factors in the work situation on mental health. Dr. Robert Dubin (University of Illinois, Urbana, Ill.). $8,000. A study to determine the relation between mental health and the social relations of the worker in the work situation, the satisfaction he obtains from his work, and the technological division of labor.

M-486 The effect of various life situations on gastric activity as measured by blood and urine pepsinogen. Dr. I. Arthur Mirsky (University of Pittsburgh, Pittsburgh, Pa.). $10,000. The effect of various environmental stimuli on the excretion of pepsinogen and the concentration of this enzyme in the blood in normal and emotionally disturbed persons.

M-487 Effects of ACTH and other steroids on adaptive responses. Dr. I. Arthur Mirsky and Dr. Robert A. Patton. (University of Pittsburgh, Pittsburgh, Pa.). $7,830. The effect of ACTH and cortisone on physiology and behavior, using biochemical and conditioned-response techniques.

M-489 Effects of early postnatal experience upon adult reactions to stress. Dr. Philip F. D. Seitz (Indiana University School of Medicine, Indianapolis, Ind.). $11,901. To test the clinical finding that early feeding experiences can significantly affect adult mental health, this study will experimentally vary the feeding of young cats and then observe their behavior in stress situations during maturity.

M-493 Effects of reorganization of mental hospital ward administration on recovery of patients. Dr. Robert A. Cohen (Washington School of Psychiatry, Washington, D. C.). $28,674. A study to analyze ward organization and staff-patient relationships as they affect recovery of hospitalized mentally ill patients.

M-499 A study of adjustment and recovery of former patients of a State mental hospital. Dr. James W. Coddington (University of Arkansas, Fayetteville, Ark.). $15,919. Analysis of readmission rates and length of stay of 33,000 patients admitted to Arkansas mental hospitals from 1930 to 1948, plus detailed follow-up study of two selected smaller samples.

EXPLANATION OF STUDY OF MENTAL HEALTH OF HUTTERITES

Mr. BUSBEY. What is this study "Cultural and Psychiatric Factors in the Mental Health of the Hutterites"?

Dr. SCHEELE. That is a project which is being carried on in one of the Canadian Provinces by a staff from Wayne University in Detroit.

Periodically, an allegation is made that there are certain populations groups that do not have mental illness. For example, I well recall when we first opened negotiations with the Russians in Berlin at the end of the war, trying to work with them and the British and French on a quadripartite basis as had been agreed to but which did not succeed because of Russian failure to cooperate. I was on General Clay's staff at that time. A Russian liaison officer kept poking fun at us and saying "Everybody in your country is crazy. Your soldiers break down. They have all kinds of mental problems. We don't have mental problems in our country." I don't believe this.

Well, the Hutterites, too, were represented as having little mental illness and few of them having to be hospitalized with a whole variety of mental disorders.

Dr. Joseph W. Eaton, a cultural anthropologist on the faculty of Wayne University in Detroit, had this project which he wished to do. He applied for funds, and he was given funds. It has been under way for 2 years, and is, I believe, in the terminal year now, which will wind it up.

In this he is attempting to ascertain whether or not there is something in their method of living and in their religious system that influences mental health. I should say, too, that he is going farther back than that. The first thing to determine is whether they have any mental illness. He has a man from British Columbia who is the psychiatrist who is examining the people, visiting with the elders of the various colonies, and studying whether or not they actually do get sick, and then checking with various non-Hutterite physicians that they might have gone to to see who would know what their problems are.

This, again, is a matter of studying civilization in relationship to mental breakdown.

Mr. BUSBEY. Well, Doctor, is it not generally conceded by psychiatrists that people who live in a more rural section of the world compared to a highly industrialized nation like the United States, with all our responsibilities and trials and tribulations, and the pace at which we have to go, certainly should not break down as easily and as fast as the average American?

Dr. SCHEELE. I am sorry to say I cannot answer that with any degree of accuracy. You would have to ask Dr. Felix that question. My general impression is that that is not necessarily true for that relationship. There are a large number of mental breakdowns among folks who have lived all their lives on farms.

Mr. BUSBEY. In what part of the world do the Hutterites live?

Dr. SCHEELE. They live in Saskatchewan, I believe, and also there is another group of them who settled in the Dakotas. The study also encompasses the group who did not follow the old colony system that the group in Canada is following. This group, as I understand it, is something akin to the Amish we have in northern Indiana and some of the groups that came on through Pennsylvania. They were originally a Swiss group, something like Mennonites.

This project, like the other one, is an effort to try to study living patterns and backgrounds and effects on people. It is not unlike trying to study traffic flow at street intersections to see if we need a red light. It is getting little building blocks in the total problem of the working of man's mind.

EXPLANATION OF PEYOTE CULT STUDIES

Mr. BUSBEY. Next there is "An Analysis of the Peyote Cult as a Social Movement Among the Navajo Indians." What does that pertain to?

Mr. SCHWABE. If you will excuse me just a moment, I would say it does not apply alone to the Navajos. It also applies to other tribes of Indians. The question has arisen in Oklahoma at times, and I have it presented to me; so, it is not confined to the Navajos.

Dr. SCHEELE. The Peyote is a plant which the Indians use in a religious—or some might call it a semireligious—ritual. It is a substance on which several views have been held—one, that it is narcoticlike; it is addicting, and that in the use of it folks find that they cannot leave it; they cannot stop using it. Others have said that it is not addicting, and that seems to be the general consensus. It is something used as a symbol in the religious ceremony.

I do not know whether they drink it as liquid or how they take it. But they believe it puts them in communication with their ancestors.

This is a matter of studying the influence of this on the Indians. If that is a problem that is a major one from a health standpoint, it seems appropriate that something ought to be done to stop it. If it is not, then we should better understand just what it adds up to.

Mr. BUSBEY. I will pass up these others for the sake of time here, as long as you are going to furnish the complete list for the record.

Now, are these reports filed with you?

MECHANICS OF PROJECT APPROVAL AND GRANTING OF FUNDS

Dr. SCHEELE. Yes, sir. In the first place, an application is submitted to us which describes in detail the project proposed, along with a listing of the names of the principal investigator, the names of the people who will participate with him, their salary levels, the amounts of equipment and supplies required in the project, the overhead to the university, and total amounts and funds from other sources. Very often support may be coming to a project from a voluntary health agency or a foundation, and they are applying for additional funds to fill the project out.

The project is submitted to us. The project from Northwestern is actually submitted by the university. That is, the president of the university, Dr. Miller, endorses the project as one which the university has an interest in and wants to go on. The institution itself is the transmitter of the project endorsed by them. They usually have had some screening by their own people.

If the project is approved, the check is sent out to the university by the Treasury Department with the proper timing. Parts of the money are sent as they need it. Their accounts are checked by auditors to certify the use of the funds for the purpose stated and approved by the Council. If they are required to make some changes, if they find they want to shift and get a certain kind of individual at one salary when they had two other kinds of people at a different salary, those changes can be made. In other words, we keep this research fluid enough so that it is not restraining in terms of holding the investigator down. We are trying not to interfere with freedom of research, although some say we demand too much on paper from them. But changes can be made in the interest of good research, and our councils come back into the picture on the changes.

Finally, when the project is completed, and sometimes in the course of the project, progress or final reports are given to us. Actually, these investigators are part of the total scientific staff of the country, and they publish in several hundred scientific journals.

Sometimes projects are continuing. Sometimes it requires two or three or four or five or even more years to complete the project. In those cases, we demand progress reports from them to justify our continuation of support.

AMOUNTS ALLOCATED FOR APPROVED RESEARCH PROJECTS

Mr. BUSBEY. How much money was allocated in the 1952 budget for these studies that were recommended by the National Advisory Mental Health Council?

Dr. SCHEELE. In the field of grants, $1,663,000.

Mr. BUSBEY. And how much is in the 1953 budget for these studies?

Dr. SCHEELE. $1,662,000.

Mr. BUSBEY. If I wanted to look over some of these studies, where would I apply to get copies of them?

Dr. SCHEELE. You could just call my office or call Dr. Sebrell, the Director of the National Institutes of Health. We would be very happy to send them to you.

We have only one problem with them. We do not ordinarily publish the full details of an investigator's project. There is great pride among the scientists on trying to get a first. Part of their payoff in life is to discover new facts. And so very often they will work more or less in silence on their project until they have something worth while reporting. But there is nothing in those requests that is not really public property. We just do not routinely publish the details.

Mr. BUSBEY. For instance, this Professor Winch at Northwestern will certainly make a report to the Mental Health Institute as to his conclusions.

Dr. SCHEELE. Yes; he will.

Mr. BUSBEY. That report should be public property after that; should it not?

Dr. SCHEELE. Yes, sir.

Mr. BUSBY. Has Professor Winch completed his study as yet.

Dr. SCHEELE. No, sir. I am not sure of the dates on that. This grant was made only a few months ago and so it is just really under way now, and his report will not be coming along for some time. It is possible that it started July 1. I do not have the time here.

Mr. BUSBEY. I think that is all, Mr. Chairman.

STEPS OF DELIBERATION PRIOR TO ISSUANCE OF GRANTS FOR SPECIAL PROJECTS

Mr. FOGARTY. Doctor, after the president of the university has this project screened and apparently has exhausted other means to funds, what happens to it then?

Dr. SCHEELE. It comes to the Public Health Service where it is routed to the Research Grants and Fellowships Division. There, because many people will have to consider each project, they have it duplicated. Copies are immediately sent to each of the council members at home. There is a large volume of work for them to go through when they come into these 2- or 3-day meetings. That gives them a chance to look at these individually when they arrive. They can ask others questions about them. In some instances they may even do a so-called project-site visit.

Then the staff of the Division, working with the Mental Health Institute, to which the project is referred, ascertains which group or groups of specialists on our so-called study sections can most appropriately be the peers, in a sense, of this particular investigator and understand the kind of thing he is doing. In other words, we do not have a physicist review a project in chemistry because he would not necessarily be competent to do it as well as another chemist, unless it happened to involve physics with the chemistry.

These projects then are sent to these study sections on which serve, on the average, about 10 or 12 of the Nation's leading scientists representing rather narrow scientific disciplines. By narrow I mean quite specialized. They review the project. They can call for more information if they feel it is not adequately described. They finally come forth with recommendations. Then we in turn place those recommendations before the appropriate National Advisory Council, whether it is the Cancer Council or Heart Council—the Mental Health Council in these cases—and they in turn deliberate.

In some instances they will agree with the study section and say, "The study section recommended approval in the full amount, X dollars; we recommend the same." They may disagree completely with the study section. They may say, "The study section approved the project, but we think it is no good and should not be done." Or they may say, "We think it requires some more study. We do not think their deliberations show that they looked adequately at a particular aspect of the project." They may send it back for review by the study section. They may decide they want to have someone go and visit the investigator to get a little more information on what he is proposing to do. They may decide it is all right, but he is a little bit out of line on a salary scale. Typically, we follow the salary scales of the university. You will find that on the Winch project the salary scales for such people as are employed will parallel those of the general university scale.

You can readily imagine the other kinds of actions they may take. Then we in turn make a final decision and we have an opportunity to make that final decision only in those cases in which they have recommended a full grant or partial grant. Obviously, the Surgeon General of the Public Health Service is not a jack-of-all-trades. He could not possibly know all these fields as intimately as the scientists on study sections do and the broader councils do. We are very much guided, then, by what they have said. In other words, generally speaking we approve these projects.

Mr. BUSBEY. If I may, Mr. Chairman—this program started in 1949?

Dr. SCHEELE. In fiscal year 1948, in the case of the Mental Health Institute.

Mr. BUSBEY. Many reports have been submitted since then, I take it.

Dr. SCHEELE. Yes, sir.

USEFULNESS AND AVAILABILITY OF PROJECT STUDY REPORTS

Mr. BUSBEY. Are those reports available in the library of the Federal Security Agency?

Dr. SCHEELE. Those are available for study in the Mental Health Institute—in the files of the Mental Health Institute—and in addition most of them are available in the scientific literature of the United States—in appropriate journals.

Mr. BUSBEY. After these reports are made, what use is actually made of the reports? What distribution or dissemination of the information in the reports is made?

Dr. SCHEELE. The usual distribution that occurs within the field of medicine. The scientists subscribe to the various journals in their fields. In other cases, they borrow them from libraries of their institutions.

No scientist today, as could no scientist 10 or 20 or 30 years ago, could go on with his own research without knowing everything going on in the field, so he is constantly reading. In some cases we have journals that publish abstracts. The field of chemistry is such an extensive field that there is a journal called Chemical Abstracts which will take everything published periodically in the chemistry field in a range of hundreds and hundreds of journals from all over the world, in all countries that they can get literature from, and they will abstract these so that the scientist then seeing the abstract says "This one—or these two or three or dozen—are ones I must get hold of and read in toto because I will not be able to carry on my project without knowing what these people did, because maybe they reported findings which will guide me." The information which comes forth in the mental health research field is published to the world in exactly the same way.

Mr. BUSBEY. Has any study been made to determine what use has been made of these reports after they have been filed?

Dr. SCHEELE. No, sir. But that is not an easy thing to determine. You can tell what reports a scientist has read when he publishes and he has a bibliography. If he has a bibliography with many articles listed as references and it includes one of these, then you know that he used it. But the scientist reads probably 100 scientific reports for every one that he ever uses as a reference. Many of them are irrelevant when he finally gets into them. So there would be no way to survey the country to see what use was made of any one report.

Mr. BUSBEY. I particularly had in mind scientific magazines.

Dr. SCHEELE. Well, I think we have some fair idea of the extent to which the people who get grants from our various institutes are actually publishing in scientific literature. They are publishing, and I am sure we will find almost no project that we have ever supported that did not find publication somewhere in the world's scientific literature. This is the life work of these people. The end result of scientific research is publication. So all of these things do appear in the literature.

Mr. Chairman, did I cover your question adequately?

Mr. FOGARTY. I think so. I think you have already submitted for the record the names of the Mental Health Council members, haven't you?

Dr. SCHEELE. Yes, and with your permission, we will submit to you a list of our study sections and study section memberships and their backgrounds.

Mr. FOGARTY. That will be inserted in the record at this point.

(The information follows:)

NATIONAL INSTITUTE OF MENTAL HEALTH
MENTAL HEALTH STUDY SECTION

Dr. Edwin F. Gildea, chairman, head, department of neuropsychiatry, Washington University Medical School, St. Louis, Mo.
Dr. Robert B. Aird, chairman of division of Neurology, University of California Medical Center and director, Electroencephalographic Laboratory, visiting neurosurgeon and visiting neurologist, University of California Hospital, San Francisco, Calif.
Lt. Col. Carlos C. Alden, Jr., USAF (MC), Department of the Air Force Headquarters, United States Air Force, Washington, D. C.
Dr. S. Howard Armstrong, Jr., chairman, department of medicine, the Presbyterian Hospital, and professor of medicine, University of Illinois School of Medicine, Chicago, Ill.
Dr. John D. Benjamin, psychiatrist, child research council, University of Colorado School of Medicine, Denver, Colo.
Dr. Leonard S. Cottrell, Jr., social psycologist, Russell Sage Foundation, New York, N. Y.; president, American Sociological Society (1950).
Dr. George L. Engel, associate professor of psychiatry and medicine, University of Rochester School of Medicine, Rochester, N. Y.
Dr. Jacob E. Finesinger, head, department of psychiatry and psychiatrist in chief, University Hospital, University of Maryland Medical School, Baltimore, Md.; chairman, research committee, American Psychiatric Association.
Dr. Francis Forster, director of department of neurology, Georgetown University School of Medicine, Washington, D. C.
Dr. Jerome D. Frank, associate professor of psychiatry and psychiatrist in charge, outpatient department, Phipps Psychiatric Clinic, the Johns Hopkins Hospital, Baltimore, Md.
Dr. Robert E. Harris, associate professor of medical psychology and chief psychologist, Langley-Porter Clinic, the Medical Center, University of California, San Francisco, Calif.
Dr. A. B. Hollingshead, associate professor of sociology, department of sociology, Yale University, New Haven, Conn.
Dr. George A. Jervis, director of clinical laboratories, Letchworth Village, Thiells, N. Y.
Dr. Erich Lindemann, associate professor of mental health, School of Public Health, Harvard University, Boston, Mass.
Dr. Donald B. Lindsley, professor of psychology, departments of psychology and pediatrics, University of California, Los Angeles, Calif; president, Midwestern Psychological Association (1951–52).
Dr. Ronald Lippitt, program director, research center for group dynamics, University of Michigan, Ann Arbor, Mich.
Dr. Wilmot S. Littlejohn, associate professor of medicine and neurology, Alabama University Medical College, and medical director, Charlanne School for Cerebral Palsies and Spastics, Birmingham, Ala.
Capt. G. N. Raines, head, Neurophychiatry Branch, Bureau of Medicine and Surgery, Department of the Navy, Washington, D. C.
Dr. Robert R. Sears, director, laboratory of human development, Graduate School of Education, Harvard University, Cambridge, Mass.; president, American Psychological Association (1950–51).
Dr. A. Earl Walker, professor of neurological surgery, division of neurological surger, the Johns Hopkins University, Baltimore, Md.
Dr. Clinton N. Woolsey, Charles Sumner Slichter research professor of neurophysiology, University of Wisconsin Medical School, Madison, Wis.
Dr. Paul Yakovlev, clinical assistant professor, Harvard Medical School, and director, Psychiatric Training Faculty of Massachusetts, Boston, Mass.

RESEARCH STUDIES BY INDUCEMENT OF NEUROSIS IN ANIMALS

Mr. DENTON. One of those things in the newspaper article that I referred to earlier concerned whether kids bleated more when they were away from the nanny goat or when they were with her. I wonder what that was about.

Mr. BUSBEY. I wonder if that would come under the "Tolerance of Environmental Stress in Aged and New-born Sheep and Goats."

Dr. SCHEELE. We can study man in relation to what happened to him after he has been under stress. In other words, we can study him after he has broken down. But one cannot take a man and subject him to stress situations in a deliberate effort to create mental illness. That is obviously not a proper kind of experiment.

In this case, aged and new-born sheep and goats have been subjected to experimentally induced neurosis, and we are getting at some of the mechanisms which go on in the process of development of neuroses in those animals. In other words, this is a substitute for human experimentation which cannot be done.

Of course, some of our friends have poked fun at some little angle of the kind that you mentioned, Mr. Denton. As I said a little earlier, some of the criticisms which have been heaped in a few of these projects are unfair in the first instance because those making the criticism did not know the full background of the projects. I am not suggesting that even these people would necessarily have accepted the projects if they had known the full background. But in the first instance the criticisms were made without knowledge of the intention of the investigator.

Mr. BUSBEY. I think that is true, Doctor. At the same time the people are not only critical but are scrutinizing things more these days on account of the terrific tax load they have to carry and the tremendous defense appropriations that Congress has to make.

While I think many people would not express disapproval in what might be termed normal times, if we had a balanced budget and were operating with a surplus, I think at times like this there is some justification for their scrutinizing these items just a little more carefully. We certainly have a responsibility as to whether at least some of these projects should be carried on during these times rather than deferring them until the economy of the country is in better shape than it is at the present.

Dr. SCHEELE. I certainly agree with the Congressman. You have that responsibility.

Mr. BUSBEY. I think appropriations for these grants should be studied and looked over very carefully by this committee this year.

Dr. SCHEELE. You folks of course have to decide how much you want to attack mental health problems.

Mr. FOGARTY. That is right, Doctor. It was this committee that started the program. It was the Congress that set up the Mental Health Act. We are responsible for the enactment of this prgram, the same as heart and cancer. I would hate to think about the health of some of our people today if we had not taken that action 4 or 5 years ago.

Mr. HARLOW. This last project you have been talking about was brought into the record last year, as I recall it, or the year before in response to a question asked by Mr. Schwabe.

Mr. SCHWABE. I do not recall. It may have been.

Mr. BUSBEY. I do not want Dr. Scheele or anyone else to get a wrong impression. I am not criticizing it or making a determination as to whether it is good, bad, or indifferent.

Mr. FOGARTY. I am glad you brought it up because we will be asked about it on the floor, I am sure.

Mr. BUSBEY. I think the whole Public Health Institute is very fortunate that they have a subcommittee on appropriations which I believe is fundamentally sympathetic to their program.

Mr. SCHWABE. And always has been.

Dr. SCHEELE. I hope that you will continue to be as long as we do a good job.

Mr. FOGARTY. It has been that way and it has been nonpartisan as far as Public Health is concerned.

Do you have any further statement to make, Doctor?

Dr. SCHEELE. No, sir.

MONDAY, JANUARY 28, 1952.

VENEREAL DISEASES

WITNESSES

DR. T. J. BAUER, CHIEF, DIVISION OF VENEREAL DISEASES
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$12,863,500	$11,653,360	$10,224,000
Transferred to "Salaries and expenses, defense production activities, Federal Security Agency," pursuant to Public Law 253		−121,000	
Adjusted appropriation or estimate	12,863,500	11,532,360	10,224,000
Proposed supplemental due to pay increases		154,000	
Reimbursements from other accounts	33,144		
Total available for obligation	12,896,644	11,686,360	10,224,000
Unobligated balance, estimated savings	−41,580		
Obligations incurred	12,855,064	11,686,360	10,224,000
Comparative transfer to "Assistance to States, general, Public Health Service"	−89,900	−102,200	
Total obligations	12,765,164	11,584,160	10,224,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct obligations			
1. Grants to States for general venereal disease control, case finding, and treatment	$10,667,252	$9,515,300	$8,400,000
2. Direct operations:			
(a) Clinical and laboratory research	349,416	368,000	365,000
(b) Technical assistance to States	1,461,557	1,442,860	1,202,000
(c) Administration	253,795	258,000	257,000
Total direct obligations	12,732,020	11,584,160	10,224,000
Obligations payable out of reimbursements from other accounts			
2. Direct operations:			
(b) Technical assistance to States	33,144		
Total obligations	12,765,164	11,584,160	10,224,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Summary of personal services			
Total number of permanent positions	726	701	586
Full-time equivalent of all other positions	19	17	8
Average number of all employees	655	643	532
Average salaries and grades:			
General schedule grades:			
Average salary	$4,115	$4,619	$4,731
Average grade	GS–6.8	GS–6.9	GS–7.3
Crafts, protective, and custodial grades:			
Average salary	$2,718	$3,035	$2,867
Average grade	CPC–3.9	CPC–3.9	CPC–3.9
Ungraded positions: Average salary	$2,200	$3,156	$3,115
Personal service obligations:			
Permanent positions	$2,638,867	$2,803,458	$2,344,257
Part-time and temporary positions	85,140	76,825	36,800
Regular pay in excess of 52-week base		9,820	9,014
Payment above basic rates	12,780	8,513	6,460
Total personal service obligations	2,736,787	2,898,616	2,396,531
Direct obligations			
01 Personal services	2,711,929	2,898,616	2,396,531
02 Travel	168,926	142,000	131,000
03 Transportation of things	35,196	22,368	18,812
04 Communication services	15,997	15,365	13,250
05 Rents and utility services	27,207	24,700	19,900
06 Printing and reproduction	69,571	65,852	59,287
07 Other contractual services	41,693	80,349	64,350
Services performed by other agencies	9,676		
08 Supplies and materials	533,842	365,943	222,360
09 Equipment	101,122	82,065	70,411
11 Grants, subsidies, and contributions	9,016,016	7,880,222	7,219,894
15 Taxes and assessments	5,287	10,980	11,705
Subtotal	12,736,462	11,588,460	10,227,500
Deduct charges for quarters and subsistence	4,442	4,300	3,500
Total direct obligations	12,732,020	11,584,160	10,224,000
Obligations payable out of reimbursements from other accounts			
01 Personal services	24,858		
05 Rents and utility services	5,111		
06 Printing and reproduction	2,650		
08 Supplies and materials	525		
Total obligations payable out of reimbursements from other accounts	33,144		
Total obligations	12,765,164	11,584,160	10,224,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$482,874	$522,430	$339,560
Obligations incurred during the year	12,855,064	11,686,360	10,224,000
	13,337,938	12,208,790	10,563,560
Deduct:			
Reimbursable obligations	33,144		
Unliquidated obligations, end of year	522,430	339,560	274,000
Adjustment in obligations of prior years	12,758		
Obligated balance carried to certified claims account	2,327		
Total expenditures	12,767,279	11,869,230	10,289,560
Expenditures are distributed as follows:			
Out of current authorizations	12,425,141	11,199,000	9,950,000
Out of prior authorizations	342,138	522,430	333,360
Out of anticipated 1952 supplemental for pay increases		147,800	6,200

Mr. FOGARTY. The committee will come to order.

The committee has before it this afternoon Dr. Bauer and staff, who will explain the budget for the control of venereal disease. Do you have a general statement for the committee, Doctor?

Dr. BAUER. Yes; I have, sir.

GENERAL STATEMENT

Mr. Chairman, members of the committee, I am pleased today to be able to report that substantial gains have been made in reducing the incidence of syphilis in the United States. Total syphilis morbidity reached an all time low in 1951, a reduction of about two-thirds as compared with 1943. This encouraging trend seems to be continuing.

PROGRAM FOR CONTROL OF VENEREAL DISEASES

The venereal disease control budget for the fiscal year 1953 will support a program which is estimated to find and to bring to treatment some 180,000 cases of syphilis in all stages and about 240,000 cases of gonorrhea.

The development and introduction of a shortened, acceptable out-patient schedule of treatment for syphilis will enable States to provide, with the funds requested, decentralized out-patient diagnostic and treatment services, and to continue case-finding and prevention activities. As in-patient facilities are closed it will be necessary to develop or reestablish out-patient centers for the diagnosis and treatment of venereal disease.

The in-patient facility was a highly centralized operational unit often serving the entire State. Out-patient centers, on the other hand, will be established in various parts of the State. As in-patient expenditures are reduced it will be necessary to increase expenditures for out-patient services. However, the net result will be an over-all reduction in expenditures for diagnosis and treatment.

The most important problem we have to face in decentralizing in-patient facilities is to make sure that we do not lose the opportunity for contact interviewing. Under the out-patient plan it will be necessary for interview-investigators to cover more than one center. Effective utilization of their services will depend upon speedy com-

munication and rapid movement of these investigators from one place to another.

For example, the telephone, the radio, and the telegraph are being used to speed up the transmission of contact information and the investigation of the case. As these methods prove satisfactory in one area, their use will be encouraged in others.

DECREASE IN VENEREAL DISEASE CASES

I am pleased also to report today that the rise in venereal disease that historically accompanies mobilization has not occurred during the past year. On the contrary, during the fiscal year 1952, through the cooperative efforts of the Military Establishment and the State health departments, there has been a continued reduction.

The attachment of permanent civilian interview-investigators to military establishments has given the local health officer information to detect the sources of infection as well as to prevent new infections, not only in the civilian population but in the military population.

At the same time, State and local health departments to a large degree have shifted their interview-investigators over into industrial and defense areas, thus protecting many young people who are working in defense activities and who are away from their home environments. As of this date, there are 153 specially trained interview-investigators, 50 of whom are actually working in military establishments. The others are in defense and military areas.

The sharp decline in syphilis rates occurred only after the effective use of contact interview-investigation, and only after it was vigorously applied. The success of contact interviewing in syphilis control requires that this same technique be used in gonorrhea control. As in syphilis control, it is most important to find all the sexual contacts of gonorrhea.

Gonorrhea very frequently reappears in patients after they have been treated because of the fact that we have not ferreted out their circle of acquaintances and brought them under treatment by the interview-investigation process.

Of course, many syphilis cases that were missed in the earlier days, when contact interview-investigation was less vigorously applied, are now being treated for latent syphilis and the late complications of syphilis in order that they do not become public charges.

ESTABLISHMENT OF CONTROL CENTERS

Venereal disease control and prevention centers are being located or reestablished in large metropolitan areas or thickly populated areas, particularly where there is a high prevalence of venereal disease. In sparsely populated areas, where private physician participation is available, State and local health officers might well follow the plan used in Idaho where the private physician not only affords most of the diagnosis and treatment services but also the interview opportunity. Where private physicians are not available in sparsely settled areas, it will be necessary to transport patients to control centers.

NUMBER OF VENEREAL DISEASE CASES REPORTED IN 1947 AND 1951

In the peak year of 1947 there were reported in the United States 806,000 cases of venereal disease of all types. In 1951 there were reported in the United States 495,000 cases. Thus, venereal disease, even though its morbidity rate has decreased one-half since 1947, still has the highest morbidity rate of any serious communicable disease.

It is my belief that we must continue our alert and effective efforts of both case finding and treatment if we are force the venereal disease rate lower and also keep venereal disease from being introduced into this country from other countries.

EXPLANATION OF BUDGET REQUEST

Mr. FOGARTY. Thank you, Doctor.

In 1952 you estimate you will have available $11,584,000, and you are asking for $10,224,000, which is a reduction of $1,360,000. Now, in the control of venereal disease, how much does the pay act increase of 1952 amount to?

Mr. THOMPSON. The pay act in 1952 is $154,000.

Mr. FOGARTY. What are you asking in the supplemental?

Mr. THOMPSON. That is the amount that is being asked for in the supplemental, sir.

Mr. FOGARTY. Does that cover your entire cost?

Mr. THOMPSON. The estimated cost was $181,000.

Mr. FOGARTY. So you are absorbing $27,000?

Mr. THOMPSON. Yes, sir.

Mr. FOGARTY. You have 701 positions in 1952.

Dr. BAUER. That is correct.

Mr. FOGARTY. You are asking for 586 in 1953, which is a reduction of 115 positions. Of that reduction 76 are in grants to States and 39 in technical assistance to States.

Dr. BAUER. That is correct, sir.

DECREASE IN APPROPRIATIONS SINCE 1949

Mr. FOGARTY. Now, in 1947 what was your total appropriation?

Dr. BAUER. 1947?

Mr. FOGARTY. Or in 1948.

Dr. BAUER. In 1947 the Federal VD appropriation was $16,909,800. In 1949, which was the highest appropriation we had, $17,370,000.

Mr. FOGARTY. You have been going down——

Dr. BAUER. Since 1949.

Mr. FOGARTY. Every year since then?

Dr. BAUER. Since 1949.

Mr. FOGARTY. So you have gone down about $7,000,000 in the last 3 or 4 years?

Dr. BAUER. That is correct.

RAPID TREATMENT CENTERS

Mr. FOGARTY. Doctor, in just a brief way tell us something about these rapid treatment centers, how they were started and what has been accomplished and what their status is now.

Dr. BAUER. The rapid treatment centers were established at the beginning of World War II to provide rapid treatment to large numbers of VD patients. Until that time the treatment was long, and required weekly injections of arsenic and bismuth. Some investigators found out that if you would concentrate these heavy metals into a period of 7 days to 6 weeks that you could decrease the time required for treatment by about 17 months.

The rapid treatment centers served a very useful place during World War II because they were actually the keystone of the entire venereal disease control program. In these centers we were able to keep patients long enough to make them noninfectious. The centers served as a place for treatment evaluation, for education of the patient, for case-finding interview, and for training of our personnel for venereal disease control.

If my memory strikes me right, penicillin came into the picture about 1943, investigated and reported by Dr. John Mahoney, who was the Director of the Venereal Disease Control Laboratory of the Public Health Service. This changed the entire concept of treatment of syphilis as well as gonorrhea.

With these centers we now had a place where patients could be treated in a matter of days rather than weeks or months, and the centers served as a nucleus for investigating this very potent antibiotic. I think it is safe to say that we have been able to evaluate the therapy of syphilis in the short period of time that we have because we were able to concentrate our efforts in rapid treatment centers.

At the beginning of the fiscal year 1952, there were 19 rapid treatment centers in operation and 19 bed contract rapid treatment facilities.

Mr. FOGARTY. In what sections of the country?

Dr. BAUER. Most of these centers are located in the South or southeastern part of the United States. There are a few in northern urban areas. Since the begining of this fiscal year we have been able—by "we" I mean the States and local health departments—to close four or five more centers. It is anticipated additional centers will be closed during this year.

PASSENGER CARS FOR REPLACEMENT

Mr. FOGARTY. You are asking for 10 passenger cars this year?

Dr. BAUER. We are asking for 10 passenger cars this year.

Mr. FOGARTY. What is the justification?

Mr. THOMPSON. They are for replacement, Mr. Chairman.

Mr. FOGARTY. Under the formula that you have been working under?

Mr. THOMPSON. Yes, sir.

Mr. FOGARTY. What is that formula again?

Mr. THOMPSON. Over 60,000 miles——

Mr. FOGARTY. Or 6 years old?

Mr. THOMPSON. That is correct.

EXPLANATION OF APPROPRIATION TRANSFERS MADE IN 1952

Mr. FOGARTY. What are these deductions on page 1 of $121,000 and $102,000?

Mr. HARLOW. The $121,000 is money that was transferred, Mr. Chairman, to the appropriation which was made to the Federal Security Agency for claimant agency activities.

Mr. FOGARTY. What was it used for?

Mr. HARLOW. It was used to supplement the appropriation that was made by Congress to carry on the claimant agency work. You will recall that Congress appropriated $400,000 to the Federal Security Agency to carry on this activity and then inserted a provision in one of the appropriation acts that the agencies should or must transfer from their regular activities sufficient funds to make up whatever other funds were necessary in order to carry on that work.

Mr. FOGARTY. I remember that now.

Mr. HARLOW. This $121,000 is a part of the supplementation that we made.

Mr. FOGARTY. What about the $102,000?

Mr. HARLOW. The $102,000 involves the consolidation into one appropriation of funds that are used for the basic staff of the Public Health Service in the agency regional offices.

GRANTS TO STATES

Mr. FOGARTY. I think I will ask that this table on page 4 be inserted in the record to show the grants to the various States for venereal-disease control.

(The table referred to is as follows:)

Grants to States for venereal disease control

State or territory	1951 payment	1952 allotment	State or territory	1951 payment	1952 allotment
Alabama	$415,671	$344,440	New Jersey	$122,282	$99,280
Arizona	58,505	66,940	New Mexico	127,006	48,450
Arkansas	698,768	609,420	New York	265,434	244,740
California	221,197	160,440	North Carolina	562,429	483,350
Colorado	43,447	36,960	North Dakota	25,166	27,340
Connecticut	31,054	33,850	Ohio	372,060	327,150
Delaware	23,087	16,900	Oklahoma	173,899	150,140
District of Columbia	181,513	185,690	Oregon	42,733	25,200
Florida	457,317	503,480	Pennsylvania	294,852	204,930
Georgia	1,199,464	995,230	Rhode Island	16,397	15,500
Idaho	30,007	29,690	South Carolina	423,339	527,960
Illinois	447,453	287,460	South Dakota	21,961	20,550
Indiana	105,802	91,160	Tennessee	205,223	168,450
Iowa	57,293	53,480	Texas	730,324	672,720
Kansas	48,750	42,990	Utah	23,197	20,600
Kentucky	358,505	339,460	Vermont	6,588	13,800
Louisiana	520,116	500,430	Virginia	227,405	136,130
Maine	21,636	21,700	Washington	49,261	39,140
Maryland	190,455	171,330	West Virginia	172,648	180,880
Massachusetts	56,733	57,490	Wisconsin	39,880	27,100
Michigan	159,552	115,390	Wyoming	14,666	15,800
Minnesota	50,139	25,200	Alaska	21,412	28,930
Mississippi	673,203	594,250	Hawaii	20,387	16,200
Missouri	293,358	308,300	Puerto Rico	217,688	317,160
Montana	18,776	17,300	Virgin Islands	56,564	16,600
Nebraska	41,201	45,630			
Nevada	19,755	20,090	Total	[1]10,667,252	[2]9,515,300
New Hampshire	10,674	12,500			

[1] Includes $5,178,721 in project grants for operation of rapid treatment facilities, out-patient treatment, case-finding, diagnostic, and laboratory services.

[2] Includes $5,990,300 for project grants, the allocations of which are tentative and subject to change based on applications for and approval of individual projects.

Mr. FOGARTY. Mr. Schwabe?

LOCATION OF HOSPITALS FOR IN-PATIENTS AND BED CONTRACTS

Mr. SCHWABE. Doctor, with reference to these rapid-treatment centers, your activities in connection with venereal diseases, their control and treatment, are you maintaining now any hospitals in which venereal-disease patients are treated as in-patient people? If so, where are such hospitals?

Dr. BAUER. The States and local health departments with the support of the funds in the Venereal Disease Division of the Public Health Service are maintaining rapid treatment centers in—would you like me to list all the names of them? There are about 16, I would say, or 15.

Mr. SCHWABE. Will you supply them for the record, please, sir?

Dr. BAUER. I shall be very happy to supply the list of the rapid-treatment centers that are established as hospitals for the exclusive treatment of venereal disease.

Mr. SCHWABE. For in-patient cases.

Dr. BAUER. And also bed contracts with various others.

Mr. SCHWABE. I was coming to that next. In addition to these 16 hospitals, are there bed-contract facilities?

Dr. BAUER. We had, as of the beginning of the fiscal year 1952, 19 bed contracts.

Mr. SCHWABE. In addition to the 16 you referred to a minute ago?

Dr. BAUER. That is correct, sir.

(The information requested is as follows:)

VENEREAL DISEASE IN-PATIENT FACILITIES IN OPERATION JULY 1, 1951

RAPID-TREATMENT CENTERS	BED CONTRACTS
Alabama, Birmingham	Alaska
Arkansas, Hot Springs	California
Florida, Melbourne	Connecticut
Georgia, Alto	District of Columbia
Illinois, Chicago [1]	Illinois
Kentucky, Louisville	Iowa
Louisiana, New Orleans [2]	Kansas
Louisiana, Pineville	Maryland
Mississippi, Greenwood	Massachusets
Mississippi, Meridian	Nebraska
Missouri, St. Louis	New Jersey
North Carolina, Durham	North Dakota
Ohio, Columbus	Ohio, Cincinnati
Oklahoma, Oklahoma City	Ohio, Cleveland
South Carolina, Florence	Pennsylvania, Philadelphia
Texas, Overton	Pennsylvania, Pittsburgh
Texas, San Antonio	South Dakota
West Virginia, South Charleston	Utah
Puerto Rico [3]	Virgin Islands [4]

[1] Closed December 31, 1951.
[2] Converted to out-patient November 1, 1951.
[3] Converted to out-patient December 31, 1951.
[4] Converted to out-patient December 1, 1951.

PURPOSE OF GRANTS TO STATES

Mr. SCHWABE. Are these hospitals that you spoke of, other than the contract hospitals or contract-bed arrangements, maintained by the Public Health Service, or are they hospitals that are owned, maintained, and operated by others, and you merely play a part as far as this field of your work is concerned?

Dr. BAUER. The venereal-disease-control hospitals are operated either by State or local health departments from funds allocated to the States on their request. There are two exceptions to this, and they are Hot Springs, Ark., and Midwest Medical Center in St. Louis, in which it is a joint effort. The hospital in Hot Springs, Ark., has been the training hospital of the Venereal Disease Division since about 1921.

I might add that, on request from the various State and local health departments, we frequently supply them with personnel, principally doctors and nurses, personnel that they cannot for many reasons acquire in their own communities.

OPERATION OF HOSPITALS

Mr. SCHWABE. That is, as an over-all operation, you do not operate any of these hospitals except at Hot Springs and St. Louis, as you have narrated?

Dr. BAUER. They are under the administration of the State or local health departments.

Mr. SCHWABE. Well, then, let me explore this a little further. Take the Public Health Service's hospital at Brighton, some 5 miles west of downtown Boston. First, that is a hospital that is operated by the Public Health Service, is it not?

Dr. BAUER. That is a hospital——

Mr. SCHWABE. Or are you familiar with that?

Dr. BAUER. That is a United States Public Health Service hospital in the Bureau of Medical Services, which Dr. Dearing or someone else could talk about.

Mr. SCHWABE. I understand, but do you have, for instance, in that hospital, a venereal-disease department?

Dr. BAUER. There are wards or activities for the diagnosis and treatment of venereal disease in all of the United States Public Health Service hospitals that I am familiar with, and I think that is all of the large ones.

Mr. SCHWABE. Is that true of the large one at San Francisco also?

Dr. BAUER. That is correct.

Mr. SCHWABE. And at Seattle?

Dr. BAUER. That is correct.

Mr. SCHWABE. For merchant seamen, as a rule?

Dr. BAUER. They are beneficiaries of the Government who enter that hospital.

Mr. SCHWABE. Then you have a lot of out-patient hospitals that you operate and in which you have divisions applicable to venereal-disease diagnosis and treatment?

Dr. BAUER. That is correct. I would like to make it clear that those are under the supervision of another division in another bureau, not under the supervision of the Division of Venereal Disease, although we work very closely with them in developing adequate treatment methods.

Mr. SCHWABE. What is the other bureau that you are speaking about?

Dr. BAUER. The Bureau of Medical Services.

Mr. HARLOW. Those hospitals, Mr. Schwabe, and out-patient offices that you have in mind are those which we operate for Government beneficiaries and treat all diseases as well as venereal diseases.

Mr. SCHWABE. I appreciate that, but there are these venereal-disease divisions or departments, or whatever you term them, where you diagnose and treat venereal diseases for those who are beneficiaries and entitled to the services of such hospitals, in-patient and out-patient. Is that not correct?

Dr. BAUER. That is correct, sir.

Mr. SCHWABE. And there are rapid-treatment centers in those hospitals, you might say, for all practical purposes?

Dr. BAUER. That is correct.

Mr. SCHWABE. Which are maintained and operated by the Public Health Service?

Dr. BAUER. That is correct, sir.

Mr. SCHWABE. Some of these are rather extensive in their operations? That is, they have a lot of patients, do they not? And others have a very limited number, of course.

Dr. BAUER. That is true, and particularly true in Staten Island, which has a large service.

Mr. SCHWABE. And also down in New York there. I cannot think of that address now. You have a seven-story building down there which I visited.

Dr. DEARING. 67 Hudson Street.

Dr. BAUER. Mr. Schwabe, I would like to add this, if I might, please. That is, that in the budget request here none of these funds go to support the various out-patient clinics and hospitals you are talking about at the present time.

Mr. SCHWABE. That is what I wanted to find out about. I do not think it had been made clear before, and I was not certain about it. Will you tell us from what source those funds for maintenance of those institutions come, or under what heading?

Dr. BAUER. May I refer that question?

Mr. SCHWABE. Surely.

Mr. HARLOW. The appropriation was entitled "Hospital and medical care."

Mr. SCHWABE. But am I right that you do not have any of this money diverted to those sources at all for personnel or otherwise?

Mr. HARLOW. Quite correct, sir. We at one time had a venereal-disease laboratory located on the grounds of the Staten Island Hospital, but that has been moved.

Dr. BAUER. There is one person at the present time doing follow-up work on research cases who is assigned there. That is all.

Mr. SCHWABE. These appropriations you are requesting here, Doctor, are primarily then for the work in conjunction with State and local organizations and hospitals? Is that right?

Dr. BAUER. That is correct. These funds are for the purpose of assisting State and local health departments to maintain detection, prevention, and control and treatment facilities for venereal disease. It is done on a grants basis.

Mr. SCHWABE. And for the Public Health Service up and down the line it operates thus?

Dr. BAUER. That is correct.

Mr. SCHWABE. I think that is all.

Mr. FOGARTY. Mr. Busbey?

Mr. BUSBEY. No questions, Mr. Chairman.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

RELATIONS WITH OTHER AGENCIES

Dr. BAUER. I would like to state that I think we should all keep in mind that the military venereal disease totally reflects the venereal disease in the civilian population, and that it is most necessary at this time to continue the activities of case finding and treatment on an all-out basis if we are going to keep the rate down not only in the military population but in the civilian population.

Mr. SCHWABE. And is it not true that the military has an important part to play in that same program?

Dr. BAUER. I might say that we are particularly fortunate in venereal-disease control in that there has been an active cooperative program since the beginning of World War II that has never stopped between all the Military Establishments, the State and local health departments, the Public Health Service, the Veterans' Administration—so much so I think it's phenomenal. We all use the same forms for reporting throughout the entire service.

Mr. SCHWABE. Not only that, but is it not true that the military has an important part to play in cooperation or else your efforts would be almost in vain?

Dr. BAUER. If we do not get the contacts and information on the sources of disease from the military, our program would be weakened tremendously because we would not know how to get to the source of the disease.

Mr. SCHWABE. And they need you as a source of information, too?

Dr. BAUER. This is a two-way——

Mr. SCHWABE. A two-way street?

Dr. BAUER. A two-way proposition; yes.

Mr. SCHWABE. Is that being carried on by you in any way in places like Japan, we will say, where our troops come in contact with the civilian population there?

Dr. BAUER. The Division of Venereal Disease, as presently supported, works only within the continental United States and its Territories.

Mr. SCHWABE. That is what I wanted you to tell us, whether it did or did not.

Dr. BAUER. Yes.

METHODS OF TREATMENT

Mr. SCHWABE. One other question, Mr. Chairman. These modern methods of using the antibiotics and so forth, instead of the old salvarsan and other metallic remedies or medications, have almost completely supplanted the former methods of treatment, have they not?

Dr. BAUER. The treatment of choice is penicillin alone. And you are correct, Mr. Schwabe, they are for all practical purposes not used any more in therapy for venereal disease.

Mr. SCHWABE. And does that carry on through what I will call the latter stages of some of the diseases? That is, particularly those which result from syphilis?

Dr. BAUER. The treatment of the central nervous system, complications of the central nervous system, the heart, or in children—in all these complications the treatment of choice is penicillin. And we just do not recommend, nor does any other group within the United States recommend, additive treatment with the heavy metals such as arsenic and bismuth.

Mr. SCHWABE. Have they done away entirely with the treatment of the central nervous system disorders resulting from syphilis, superinduced by syphilis, by such methods as the injection of live malaria bacteria and then intravenous quinine afterward?

Dr. BAUER. The effectiveness of penicillin in the treatment of complications of the nervous system is in excess of 60 percent. Therefore, penicillin alone is used always on the first try. Occasionally in stubborn cases in certain areas malaria supplements the penicillin treatment of central nervous system complications due to syphilis.

Mr. SCHWABE. It has not been completely abandoned as some of the metallic medications?

Dr. BAUER. For the cases resistant to penicillin, malaria is still used, and it has not been abandoned.

Dr. SCHWABE. That is all.

RELATIONSHIP OF APPROPRIATION DECREASE WITH INCREASE FOR HOSPITALS AND MEDICAL CARE

Mr. BUSBEY. Doctor, I was just wondering if there was any relationship between the fact that your appropriation in 1949 was $17,370,000 and this year you are asking for $10,224,000 and the increase in the hospitals and medical care, which in 1949 was $23,413,000 but increased in this year's request to $32,930,000. In other words, my question is: Is there any relationship between the decrease and the increase for the hospitals and medical care?

Dr. BAUER. To my knowledge there is no relation. The reason is due to less venereal disease and to more effective methods of therapy.

Mr. BUSBEY. In 1949 was not a portion of the workload of your division taken care of in the hospital section?

Dr. BAUER. There is not to my knowledge.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Dr. BAUER. We asked the Bureau of the Budget for $11,306,000.

Mr. FOGARTY. They gave you about $1,000,000 less than you asked for?

Mr. THOMPSON. $1,082,000.

Mr. FOGARTY. That is quite a sizable cut.

Do you have anything further to say?

Dr. BAUER. Nothing except that this cut will decrease the rapidity of reducing the venereal disease rate, in my opinion, because only by the hunters or the investigators can we ferret out these cases.

Mr. FOGARTY. That is the only way you have of preventing recurrence and spread of the disease?

Dr. BAUER. Knocking out the VD reservoir. We have no immunization in the venereal diseases so we have to just keep knocking out the reservoir of the infection and bringing them under treatment so they cannot spread these diseases.

Mr. FOGARTY. Thank you very much, Doctor.

Dr. BAUER. Thank you.

MONDAY, JANUARY 28, 1952.

TUBERCULOSIS

WITNESSES

DR. ROBERT J. ANDERSON, CHIEF, DIVISION OF CHRONIC DISEASE AND TUBERCULOSIS
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$9,400,000	$8,745,000	$8,553,000
Transferred to "Salaries and expenses, defense production activities, Federal Security Agency," pursuant to Public Law 253		−20,000	
Adjusted appropriation or estimate	9,400,000	8,725,000	8,553,000
Proposed supplemental due to pay increases		116,000	
Total available for obligation	9,400,000	8,841,000	8,553,000
Unobligated balance, estimated savings	−10,438		
Obligations incurred	9,389,562	8,841,000	8,553,000
Comparative transfer to "Assistance to States, general Public Health Service"	−131,921	−155,161	
Total obligations	9,257,641	8,685,839	8,553,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Grants to States for tuberculosis control activities	$6,350,000	$5,800,000	$5,800,000
2. Direct operations:			
(a) Cooperative applied research	730,120	760,950	728,400
(b) Technical assistance to States	1,955,930	1,898,853	1,802,480
(c) Administration	221,591	226,036	222,120
Total obligations	9,257,641	8,685,839	8,553,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	507	461	453
Full-time equivalent of all other positions	65	10	10
Average number of all employees	485	431	393
Average salaries and grades:			
General schedule grades:			
Average salary	$3,552	$4,135	$4,150
Average grade	GS-5.3	GS-5.7	GS-5.7
Crafts, protective, and custodial grades:			
Average salary	$2,446	$2,810	$2,810
Average grade	CPC-3.3	CPC-3.2	CPC-3.2
Ungraded positions: Average salary	$2,654	$2,586	$2,785
01 Personal services:			
Permanent positions	$1,728,813	$1,881,245	$1,751,804
Part-time and temporary positions	172,986	35,152	35,152
Regular pay in excess of 52-week base		5,196	5,186
Payment above basic rates	15,109	5,675	5,675
Total personal services	1,916,908	1,927,268	1,797,817
02 Travel	250,377	377,148	376,760
03 Transportation of things	19,357	14,846	14,846
04 Communication services	9,269	10,596	10,596
05 Rents and utility services	22,691	24,312	22,392
06 Printing and reproduction	27,074	33,150	33,150
07 Other contractual services	218,163	288,468	288,468
08 Supplies and materials	174,225	139,163	138,513
09 Equipment	251,647	55,783	55,353
11 Grants, subsidies, and contributions	6,363,786	5,813,600	5,813,600
13 Refunds, awards, and indemnities	2,411		
15 Taxes and assessments	1,733	1,505	1,505
Total obligations	9,257,641	8,685,839	8,553,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$440,413	$464,103	$367,000
Obligations incurred during the year	9,389,562	8,841,000	8,553,000
	9,829,975	9,305,103	8,920,000
Deduct:			
Unliquidated obligations, end of year	464,103	367,000	312,000
Adjustment in obligations of prior years	1,250		
Obligated balance carried to certified claims account	2,038		
Total expenditures	9,362,584	8,938,103	8,608,000
Expenditures are distributed as follows:			
Out of current authorizations	9,004,081	8,365,000	8,241,000
Out of prior authorizations	358,503	464,103	360,000
Out of anticipated 1952 supplemental for pay increases		109,000	7,000

Mr. FOGARTY. The committee has before it Dr. Anderson who will testify on the control of tuberculosis. Do you have a statement, Doctor?

Dr. ANDERSON. Yes, sir, I do, Mr. Chairman.

GENERAL STATEMENT

Mr. CHAIRMAN. Members of the Committee, I must admit to the temptation at a time like this to dwell principally upon our accomplishments and achievements in the control of tuberculosis. We have some gains—the fact that the number of tuberculosis deaths has been cut about in half since 1940, which is quite an accomplishment. However, if I reported only progress, it would belie the fact that there are still about 35,000 persons a year who die of tuberculosis in this country, and tuberculosis still ranks as the seventh cause of death.

So for today I would like to dwell upon the problem that we have in front of us, which I think will indicate that tuberculosis is still far from controlled, and to spend some time on the methods of approach that we are taking to bring about the more rapid control of the disease.

The problems that face us, however, are not those of the Public Health Service alone but they are those of the State and local health departments, State and local tuberculosis associations, universities, medical schools, commercial laboratories, and other private institutions, all of which to some extent have an interest in the control of the disease.

As we in the Public Health Service see it, our principal task is that of helping others in their work in accomplishing tuberculosis control. We take on some of the tasks that are not feasible for them to undertake on their own. Sometimes it is a matter of arranging a cooperative effort between several different individuals or agencies. In other instances we actually enter into the program with them. By so doing, we think we make best use of the total resources in this country in achieving tuberculosis control.

PROGRAM FOR CONTROL OF TUBERCULOSIS

Our best estimate of the problem that we have today is that there are about 1,200,000 people in this country who have tuberculosis. We can divide those 1,200,000 into four categories. Two categories would be the known and the unknown cases of tuberculosis. There are about 500,000 persons that we know of with tuberculosis. Those, in turn, might be divided into those who have active disease—in other words, those whose disease is not stabilized, who might have spread tuberculosis yesterday or who are spreading it today or who will spread it tomorrow—and the other group of inactive cases who need public health supervision.

In addition to these half million known cases, then, we have 700,000 persons with either active or inactive tuberculosis who are unknown to any health department in the country.

The work of our control program attacks the problem on the basis of these four categories. We want to move the unknown cases over into the known column and to make the active cases inactive. When we have done that, when we have gotten the cases into the known inactive category, and when we see that number rapidly dropping because we are not adding any new cases to it, then I think we can say we have tuberculosis under control.

COOPERATIVE PROGRAM FOR CASE FINDING BY USE OF X-RAY FACILITIES

What are the ways that the Public Health Service is specifically helping in this over-all program of the Nation? Case finding is the way that we sift through our population, searching for those 700,000 unknown cases of tuberculosis. Under our program of technical assistance, mentioned here, we have an activity which we refer to as the community-wide chest X-ray program which is aimed at helping the large cities in this country to conduct intensive case-finding programs. It is in the large cities where tuberculosis mortality is almost two times that of the rest of the country. It is also in those cities that it takes a large number of X-ray units and a large number of competent personnel to put on an intensive case-finding campaign.

We play our part in that program by lending X-ray equipment, X-ray personnel to operate the machines, to the cities, and we provide specialists to the cities in helping them plan and conduct their X-ray program.

One city health officer told us that it would have taken him 5 years to do with his resources what he did with our help in a matter of 4 months.

We have been X-raying between a million and a half and 2 million persons annually in this program. In 1953 we expect our total to run between 1.8 and 2 million.

In this program we have discovered about 50,00 cases of tuberculosis, since its inception, with 85 to 90 percent of them previously unknown cases. They are unknown to the health departments, unknown to doctors, unknown to the families of the individuals, and, more importantly, unknown to the individual himself.

The Public Health Service technical-assistance program also includes help for the communities where these city-wide surveys go on in the immediate follow-up of the new cases which are uncovered. That program has filled an acute need in these cities, and it has been enthusiastically received by the health agencies in the communities. It helps them handle on a temporary basis the abnormally high load of cases that result from a community-wide survey.

Thus, we help the local people capitalize to the fullest possible extent upon the potentials of the survey, making sure that the known cases which we tag do not slip back into anonymity.

There are about 15 million persons in this country who had small films last year. The mass X-ray service conducted by State and local health departments on a smaller but wider scale contributed the larger portion of that number. We have helped, though, I think, directly, all of those engaged in this program through our research efforts directed at improving the quality of X-ray equipment and through standardizing the machinery and the methods. Our case-finding programs in large cities have served as model operations for State and local health departments and their programs.

I have stressed the role of the community-wide X-ray service so prominently because I believe thoroughly that case finding must continue to be a dominant activity in tuberculosis control. In this connection, when we started out with a case-finding program, we recognized that there were certain questions that needed answers. One was: Would the chest X-ray program find the important cases in the community? Another one was: How frequently did you need to re-X-ray communities?

RESULTS OF A STUDY MADE OF CHEST X-RAY PROGRAMS

So, we set up a study in Columbus, Ga., in the fall of 1946, which we started off with a chest X-ray program. That program in Columbus, Ga., is a cooperative one with the State and local health departments. Three and a half years after that mass chast X-ray program was put on, we went back and looked over all of the mortality records of the people who died in Columbus, Ga. We checked them against our case-finding records. We learned that for the white persons in the community the initial X-ray survey program identified 80 percent

of the cases of tuberculosis that were to result subsequently in death. In other words, we did identify the important cases.

For the Negroes, the story was somewhat different. Only 50 percent of the deaths that occurred in the 3½-year period were in those who were initially found on the X-ray survey. The other 50 percent occurred in individuals who developed brand-new disease. That indicates to us that for certain special groups in the community it is necessary to have a more intensive and more frequent case-finding program.

DIAGNOSTIC TECHNIQES OTHER THAN X-RAY

X-ray is not our only possible tool of diagnosis with which we move persons across the line separating the unknown from the known. In our cooperative applied-research program we are working also with the tuberculin skin test and with various possible blood tests which might be used. Over the years there have been many blood tests which have been advanced for the diagnosis of tuberculosis, but none of them has yet proven reliable. Two showed promise in 1950, and we discussed them briefly here last year. However, when we got into small test studies, we learned that they could not be reproduced by various workers and that we needed to postpone large-scale trials. Another blood test, however, has been developed now which seems to be better; and, if the pilot studies conducted this year warrant it, we will carry out large-scale evaluation studies in 1953.

During the past year our research uncovered the fact also that in the southeastern United States there is a mild sensitivity to tuberculin which resembles that which is present in cases of tuberculosis. But we know this is definitely not tuberculosis. It does not have ill effects, and yet it can be confused with tuberculosis. This is a problem similar to histoplasmosis, which we discussed last year, but this newly found condition is not histoplasmosis. We are continuing our efforts to find out exactly what it is, to improve diagnosis of tuberculosis.

NEED FOR HOSPITAL EQUIPMENT

I would like to turn now to the half million known cases that we have in this country that we have already identified. About half of these are people with active cases, most of whom require hospitalization. It is regrettable, however, that only about 105,000 of those 250,000 are in hospitals today. The number of tuberculosis beds is short. It has increased in recent years, especially since the passage of the Hill-Burton Act. In 1951 the Hill-Burton program added about 5,000 beds approved for construction, but we need at least 50,000 more. One of our most serious problems is shortage of beds, when we realize that the patient cannot benefit from any of the improved forms of therapy unless he is in a hospital.

RESEARCH ACTIVITIES

Our research on treatment continues. We are winding up our studies on streptomycin and para-aminosalicylic acid for bone and joint tuberculosis as for pulmonary tuberculosis. This coming year we anticipate exploring the research that should be done on various other methods of therapy.

The problem of the 145,000 known cases who are not in hospitals is one which is of concern to us, inasmuch as 40,000 of these are persons with positive sputum who should not be at home but should be in hospitals, where they would not be spreading the disease.

It is a fact, too, that 75,000 of the known active cases that we have at home have not even had a sputum examination in the past year, indicating that they are not getting the proper type of supervision.

If we are ever to see all of our unknown cases become known cases, we must strengthen the tuberculosis programs of our State and local agencies further. They need more clinics, more equipment, and more personnel.

Our technical assistance to the States provides consultative services to the health departments in the technical operation of their programs, in the services that they are rendering, and also provides a review of their effectiveness. Our recommendations frequently are being carried out even before our reviewers have left the community.

One good way, of course, and one appealing way to control tuberculosis would be to eliminate once and for all the possibility of the existence of 1,200,000 cases of tuberculosis. That might be done through such a thing as an immunization. The vaccine we have been working with is BCG. We have been testing BCG since 1947, but our own work so far leaves us unsatisfied that BCG is the answer.

Again in Columbus, Ga., we tested and vaccinated the school children 4 years ago, and 3 years after vaccination we went back and found that in only one out of four children was there any demonstrable effect of that vaccination; nor could we demonstrate that the children needed the vaccine.

BCG itself varies considerably, and there does not seem to be any easy way but through experiment to find out the facts that we need to know about BCG and its application to the control of tuberculosis.

Our plans for 1953 include the continuing study of the persons whom we have vaccinated in the only two large-scale controlled experiments on BCG vaccination in the world.

If any new clinical materials, any new immunizing agents, are developed for which there is laboratory evidence of effectiveness, we certainly will want to undertake clinical trials immediately.

STEADY DECLINE IN RATE OF MORTALITY

Our tuberculosis death rate continues to decline. For 1951 it is expected to be about 20, but I would like to point out again that tuberculosis kills more than does any other disease——

Mr. DENTON. Twenty per thousand?

Dr. ANDERSON. Twenty per one hundred thousand. It still kills more in the age group 15 to 39 than does any other disease. There is no need to stress the special importance of that age group today. We must not be beguiled into complacency by the falling death rate. There were more than 121,000 new cases reported to health departments in 1950. That is about the same number of cases that have been reported annually to health departments in the past 20 years.

The job of tuberculosis control in the United States is far from finished.

That is all, sir.

EXPLANATION OF BUDGET REQUEST

Mr. FOGARTY. Thank you, Doctor.

Doctor, have you available in 1952, including a proposed supplemental of $116,000 for the pay increase, $8,685,000. You are asking for $8,553,000, which is a reduction of $132,000. You had 461 positions in 1952, and you are asking for 453 in 1953. That shows only a reduction of eight positions.

Dr. ANDERSON. Yes, sir. There is a reduction of eight positions. We keep our numbers of positions large, Mr. Fogarty, as compared to our average annual number of employees because in our city-wide chest X-ray program and in the follow-up we try to contract with the local people for any professional people available locally. However, in the event that they are not available, we need positions to hire people and send them out to those communities.

Mr. FOGARTY. Is it true that in the past year you have let many in the grades below 9 go and have taken on a few positions above grade 9, both here in Washington and in the field?

Dr. ANDERSON. I do not know the answer to that question.

Mr. THOMPSON. I do not think that that is quite correct, Mr. Chairman, if I recall the make-up of the budget. As reflected in the green sheets, you will see there is an increase of 2 positions in the Department, which is offset by the reduction of 10 in the field, making a net reduction of 8 as reflected in the estimates.

Mr. FOGARTY. I was talking about 1952 over 1951. I am not talking about the 1953 budget now.

Mr. HARLOW. I think that reflects, Mr. Chairman, in parts, the action of the Division in switching largely from strictly Federal payroll on these chest X-rays to getting some of the people in the localities on a contract basis.

Mr. FOGARTY. I see.

Dr. ANDERSON. That is true. We were hiring on our own payroll people in the large cities—clerical people particularly—for record-keeping purposes. We learned that we could arrange a contract with a local agency to supply that service, and we therefore eliminated those clerical positions.

PUBLICITY IN ADVANCE OF ARRIVAL OF X-RAY UNITS

Mr. FOGARTY. A year ago some members of the committee raised the question of sufficient publicity given in advance to the visit of these X-ray units in the various cities. I do not remember who raised that question.

Mr. SCHWABE. I think possibly I did.

Mr. FOGARTY. I remember we suggested in the report that some study should be given to that. I was wondering if you had given that any study. We said in the report:

> The committee inquired into the matter of utilization of X-ray units. The State health departments operate the mobile units in smaller cities, and the Public Health Service limits its direct operations to the larger cities. There have been some indications that in certain instances maximum publicity work has not been done in advance of arrival of the mobile unit in the community, with the result that the fullest possible coverage in the shortest possible time and thus the lowest per capita cost is not obtained.

Dr. ANDERSON. First, as far as the specific situation was concerned, we investigated that and found that that particular unit was not a State health department or one of our own units. It was a local unit, I believe, owned by the TB Association. But that is not an excuse really for the instructions that you gave me last year. We called that to the attention of all of our staff and of our regional office people and of the staff of the National Tuberculosis Association for their appropriate action.

In addition to that, we have published in the past year a series of papers upon the organization of community-wide X-ray programs, stressing the importance of paying attention to the details of publicity and organization for that purpose.

Mr. FOGARTY. There are many State-run sanatoriums for tubercular people, are there not?

Dr. ANDERSON. Yes.

AVAILABILITY OF TB BEDS IN STATE INSTITUTIONS

Mr. FOGARTY. Do you have any idea or has any survey been made as to the number of available beds that are not being utilized because of lack of help in some of these State institutions?

Dr. ANDERSON. We made such a study. I do not remember the exact findings, Mr. Fogarty. I think it was not in this past year but a year prior to this one that we did such a study. We do query the institutions annually as to the number of beds they have totally and then the number they have in operation, but we cannot ask them every year as to why there is a discrepancy between the two figures.

Roughly, however, for the country as a whole, about 85 percent of all of the beds, all the tuberculosis beds, are in operation, which I think is a pretty tight figure as to occupancy.

Mr. FOGARTY. Do you know as to the status of the sanatorium in Rhode Island?

Dr. ANDERSON. No, I do not.

Mr. FOGARTY. I know they have a waiting list all the time of people trying to get into the place, but I do not know whether all the beds available are being used or not.

Dr. ANDERSON. I do not have that information here with me, sir.

Mr. FOGARTY. Can you get it?

Dr. ANDERSON. I can get it.

Mr. FOGARTY. Will you put it in the record?

Dr. ANDERSON. All right. The information as to the situation in Rhode Island specifically?

Mr. SCHWABE. I would like to know what it is in Oklahoma, please.

Mr. FOGARTY. Get it for several States so that we can get a rather general idea of the situation.

(The information requested is as follows:)

Tuberculosis beds, Jan. 1, 1951, United States and selected States (as reported by individual hospitals)

	Reported total bed capacity	Beds not in use			
		Total	Lack of physicians	Lack of nurses	All other [1]
United States and Territories	91,267	5,681	120	1,348	4,213
Illinois	4,119	346			346
Indiana	1,619	53			53
New York	11,839	396	37	48	311
Oklahoma	910	30		30	
Oregon	555	25			25
Rhode Island	676	122			122
West Virginia	1,153	6			6

[1] Reasons given include lack of operating funds, unsuitability for types of patient (e. g. children), and in some cases lack of staff.

RESULT OF X-RAY SURVEY IN WASHINGTON, D. C.

Mr. FOGARTY. Now, I remember there was some talk about the situation in Washington, when these X-ray teams were going out, that they would never be able to take care of the number of cases they expected to find. What has been your experience?

Dr. ANDERSON. Here in the Washington, D. C., chest X-ray survey they found some 700 cases that they felt needed close supervision. The Glendale Sanitorium was able to open some extra beds that they had had not open before. If I recall the figure correctly, it was between 50 and 75 beds that they opened, which took care through turn-over of some of that load.

The rest of the load was carried in the clinic by the clinic staff together with the Public Health Nursing Section of the District Health Department. They did not have all of the beds that they should have had for the hospitalization of their cases. However, they did know the particular people in the community around whom they needed to center their efforts to prevent the spread of the disease.

ALLOCATIONS BY STATES

Mr. FOGARTY. I will ask that these tables on pages 13 and 14 which show the grants by States be put into the record.

(The tables referred to are as follows:)

Allocations of grant-in-aid funds for tuberculosis control, fiscal years 1951 and 1952

State or Territory	Allocation 1951	Allocation 1952	State or Territory	Allocation 1951	Allocation 1952
Alabama	$145,900	$132,300	New Jersey	$146,300	$139,000
Arizona	55,600	58,800	New Mexico	43,100	42,000
Arkansas	102,500	90,500	New York	464,300	441,100
California	311,500	295,900	North Carolina	200,800	176,700
Colorado	57,300	50,400	North Dakota	48,200	42,400
Connecticut	96,500	84,900	Ohio	274,700	250,700
Delaware	25,600	22,500	Oklahoma	116,100	102,200
District of Columbia	57,600	50,800	Oregon	63,400	55,800
Florida	146,400	128,800	Pennsylvania	288,000	273,600
Georgia	204,100	184,600	Rhode Island	37,700	33,200
Idaho	19,300	17,900	South Carolina	147,400	129,700
Illinois	296,500	281,700	South Dakota	27,500	24,800
Indiana	135,500	120,300	Tennessee	180,400	165,900
Iowa	57,700	50,800	Texas	199,200	193,700
Kansas	85,200	71,000	Utah	23,400	20,600
Kentucky	173,700	157,500	Vermont	21,900	20,900
Louisiana	125,900	115,500	Virginia	198,200	174,400
Maine	33,000	31,900	Washington	87,500	77,000
Maryland	137,100	120,700	West Virginia	92,100	81,100
Massachusetts	225,900	198,800	Wisconsin	112,000	98,600
Michigan	224,300	197,400	Wyoming	12,700	12,400
Minnesota	93,900	82,600	Alaska	87,100	76,700
Mississippi	154,400	135,900	Hawaii	62,700	55,200
Missouri	137,600	130,700	Puerto Rico	203,900	198,700
Montana	24,000	23,300	Virgin Islands	12,500	11,000
Nebraska	42,300	37,200			
Nevada	10,900	11,100	Total	6,350,000	5,800,000
New Hampshire	18,700	17,800			

EXPLANATION OF AMOUNT REQUESTED FOR TRAVEL

Mr. FOGARTY. How much money are you asking for travel?

Dr. ANDERSON. $376,760.

Mr. FOGARTY. This seems to me to be a lot of money to be expended on travel.

Dr. ANDERSON. That travel, sir, is associated with the city-wide chest X-ray program. It takes care of our X-ray technicians, our doctors and nurses and record people who are working on the city-wide program. That is the largest single part of that travel item under technical assistance to the States.

Mr. FOGARTY. It amounts to almost 20 percent of your total request for technical assistance to States.

Dr. ANDERSON. Yes, sir. It is a big item.

Mr. FOGARTY. Has that item been going up the past few years?

Dr. ANDERSON. Yes. It went up between 1951 and 1952. There were increased travel allowances at that time with the raise in per diem, and our costs of transportation also went up. And in 1951 we were operating in one city for an extended period of time—in Los Angeles. Our team did not move. We did not have as many moves involved in 1951.

Mr. THOMPSON. This figure would vary, Mr. Chairman, with the operations of the teams. As Dr. Anderson says, if the teams stay a long time in one place, there will be less travel than there will be if they are moving more often.

Mr. FOGARTY. Mr. Denton?

FACILITIES USED FOR TUBERCULOSIS PREVENTION

Mr. DENTON. Aside from the mobile units, what facilities do you use to carry on this campaign to prevent tuberculosis?

Dr. ANDERSON. In our own program, sir, you mean? The Public Health Service program described here?

Mr. DENTON. Yes.

Dr. ANDERSON. We use the chest X-ray campaign as one direct service on our part at the request of the State and local health departments and their agencies. In addition to that we have a cooperative research program with State and local health departments and State and local agencies which seeks to answer questions that they themselves might not be able on their own to resolve.

Furthermore, we help States and local communities through the services of our specialists who go out and work with the local people for various periods of time on their own local programs or who go out and perform surveys with the purpose of making recommendations for improving operations.

Mr. DENTON. What I am concerned about is that in a large community or a large city you would probably find an adequate local health service, but in a smaller community they usually have a part-time health officer. How do you reach people in small communities to be sure this campaign is carried on?

Dr. ANDERSON. That is done through the State health department agencies, all of whom have tuberculosis control sections or bureaus or divisions, as the terminology might be. We meet with those people at least annually to talk about ways in which services can be brought to the people in the less populated areas and communities. They are operating, on their part, case-finding machinery and clinic programs, too.

Mr. DENTON. In those cases it would be under the State health board?

Dr. ANDERSON. Yes, sir.

Mr. DENTON. Off the record.

(Discussion off the record.)

Mr. FOGARTY. Mr. Schwabe?

REFERENCE TO PRIVATE HOSPITALS

Mr. SCHWABE. There are also still a great many private tubercular hospitals and sanatoria, are there not?

Dr. ANDERSON. The number of those I am not certain of, Mr. Schwabe. I believe the number of beds they have is something of the order of 10 percent of the total beds that are available in the country. Most of the beds are city- or county- or State-owned.

Mr. SCHWABE. The city, county, and State beds and the hospitals in which they are located have increased in number a great deal within the last 10 or 15 years, have they not?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. Whereas there perhaps has been some decrease in the number of privately owned, such as church-owned, hospitals and sanatoria? Is that not correct?

Dr. ANDERSON. I do not know the exact status. I do not know whether there has been any great change one way or the other.

Mr. SCHWABE. In the privately owned, you mean?

Dr. ANDERSON. Yes.

Mr. SCHWABE. I am sure you are aware of the fact, however, that in the States with more arid atmosphere and climate, where patients generally have been wanting to go or have been sent, there has been at least for many years a great number of private institutions to take care of them. Is that not correct?

Dr. ANDERSON. Yes.

Mr. SCHWABE. Such as Colorado, New Mexico, Arizona, Utah, and so forth. And also western Texas.

Dr. ANDERSON. Yes.

Mr. SCHWABE. Are you conversant with the fact as to whether the number of patients that private institutions can take care of—some are owned by individuals, some by a group of doctors, some by a group of people, others by churches or charitable institutions, endowed institutions in some instances—is on the wane or on the increase?

Dr. ANDERSON. I do not have figures for that, Mr. Schwabe, over any period of time.

Mr. SCHWABE. It might be very interesting information, might it not, for you to find in connection with the results that are being obtained?

Dr. ANDERSON. This is something which is not of great significance here but I have heard some of my friends remark—who are associated with the private institutions—that their endowments which they are forced to rely on for part of their patient costs are not adequate to keep up with the rising costs of hospitalization.

CHARGES TO PATIENTS

Mr. SCHWABE. In some of these so-called State, county, city or municipally owned hospitals for the treatment of tubercular patients there are charges made for the hospitalization and the services, are there not?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. And others, of course, are free?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. And in some institutions some patients pay and others do not? Is that not true?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. Whereas, of course, in most of the privately owned institutions, except those that are endowed heavily or are supported by churches and such organizations, the patients have to pay practically the operating cost per patient in order that the hospital may be maintained, perhaps with a little added increment for profit on investment.

Do you concern yourself much with what is going on in those institutions other than the publicly owned institutions?

Dr. ANDERSON. Well, to the extent that Mr. Denton here mentioned, if there are vacant beds in any institution——

Mr. SCHWABE. But he mentioned the county-owned hospital as I understood him.

Dr. ANDERSON. Even in the instance of a privately owned or nonprofit or church organization, if they have beds that can be used, we try to encourage the State or county or city to make arrangements to

utilize those beds through some sort of a contract or other device for the payment of that sanatorium.

COOPERATION WITH PRIVATE INSTITUTIONS

Mr. SCHWABE. Well, I happen to know from personal experience and observation that a great many of these institutions have done a tremendous amount of good, and they have had some men on their staffs or operating them who I think would be recognized as among the leading tubercular men of the country, and I think what they have done is in many instances very much to be commended. It seems to me that there is a little lack of cooperation between your branch of the Public Health Service and those privately or charitably owned and operated institutions. I am just trying to find out whether I am right or wrong.

Dr. ANDERSON. Well, possibly this would help. Of the appropriation request that you see here, none of this money goes for in-patient treatment. Treatment has been a matter for State or local determination according to the usual pattern there, and we have not been in a position to concern ourselves particularly with the methods whereby treatment is provided.

Mr. SCHWABE. This goes to your mobile units for the detection of the disease and diagnosis, the X-ray program, and for giving information to those who are afflicted with the disease or the parents of the children who may be, and so forth, and trying to steer them into proper hands for treatment? Is that not right?

Dr. ANDERSON. This appropriation?

Mr. SCHWABE. Yes.

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. You also mentioned some of the treatments, did you not? You are the head of the tuberculosis section of the Public Health Service, and you have been trying to keep abreast with the most modern therapy, have you not?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. And in doing that I am wondering if it would not be very essential that you keep in close contact with some of these private institutions?

Dr. ANDERSON. We try to very much, sir, because they have made, as you say, a great contribution to the control of the disease, and they can do so in the future. In our case-finding programs and in our operations of that sort, the men who operate private sanatoria are included in the community group which plans the program and plans for the treatment of the individuals who are found.

In our research program I do not happen to recall the total number of private institutions that were involved in cooperatively working with us on evaluating treatment, but I know there was at least one.

REFERENCE TO DEVELOPMENTS IN TUBERCULOSIS RESEARCH

Mr. SCHWABE. I should have thought there would have been dozens of them. That is what I am marveling at—the fact that you say at least one.

I like the idea of promoting private enterprise all I can on this and the initiative that comes from allowing these private institutions or endowed institutions, as the case might be, to tell us all they know and the discoveries they have made in detection and diagnosis, in treatment, and so forth. And you have admitted—as I am thoroughly convinced from other sources—they have made a valuable contribution to the lessening at any rate of incidence of tuberculosis in this country and to the treatment of tubercular cases.

You have not given us anything that I recall in your statement to amount to anything—that is, anything that struck me as being new with reference to any recent discoveries of treatment. You said something about diagnosis and detection, I think, methods that probably are now mostly approved; but is there anything new in the field of research that you have developed with reference to treatment of tuberculosis since you last appeared before the committee?

Dr. ANDERSON. I do not know, of course, exactly what the laboratories throughout this country have under development with respect to new drugs. Those that we knew of last year that have been tried have all evidenced certain handicaps which make them unsuitable for any large-scale trial.

Possibly you would be interested, though, in respect to streptomycin therapy; that just recently there has been a new interest because of certain reports about the use of streptomycin and para-aminosalicylic acid given to patients in small amounts over an entire year's period.

Mr. SCHWABE. Some of them have been under treatment longer than a year now, have they not? That is, under such treatment?

Dr. ANDERSON. Yes. The recommended schedule at the moment calls for between 90 and 120 days of therapy without cessation. Back in the early days of streptomycin therapy there was much fear of the toxic effect of the drug on the auditory nerve and the vestibular nerve. However, as the dosage schedule was worked out, a schedule providing for 90 to 120 days of treatment was settled on. But now some individuals have been given the drugs over a year's period of time with sufficiently startling results to awaken the interest of everybody who is treating patients.

Mr. SCHWABE. What I had in mind was that you told us here before, and other representatives of the Public Health Service have told us, about streptomycin and so forth, and particularly the success that you had with administering it in cases of tubercular meningitis. You would not heretofore say it was a cure, but that at least it retarded the progress of the disease, and, instead of the patient living from a week to 10 or 12 days at most before the use of the streptomycin or its derivatives, they are still living.

I think the committee has authorized a good deal of money for that study and research and so forth, and we probably are entitled to know how you get along with it. That is what I am getting at.

Dr. ANDERSON. Our findings on the work that we have done so far I can summarize rather briefly.

Mr. SCHWABE. That is just one instance. There may be others. I am just using that as an illustration of what I am trying to elicit from you.

STREPTOMYCIN STUDIES

Dr. ANDERSON. The streptomycin para-aminosalicylic acid studies that we have engaged in show us that streptomycin is not a cure for

tuberculosis. We can save about half of the meningitis cases—studies have shown us that——

Mr. SCHWABE. Do they have a recurrence yet? It is a year since you told us anything. That is what I am trying to get at. Has there been any change in your conclusions within a year? If not, we will just shorten the talk by your telling me there has not been.

Dr. ANDERSON. No; there has not been—except the one thing that is awakening the interest of everybody is the possibility that giving streptomycin over a year's period of time may affect a number of cases for which the ordinary course of therapy was not effective.

IMPROVED LABORATORY WORK FOR DIAGNOSTIC PURPOSES

Mr. SCHWABE. You spoke a few minutes ago about histoplasmosis. That was confused frequently, was it not, a few years ago with tuberculosis?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. And today you are able to distinguish and differentiate very definitely, are you not, between the two.

Dr. ANDERSON. In many cases we are, sir.

Mr. SCHWABE. But not in all.

Dr. ANDERSON. Not in all.

Mr. SCHWABE. Is there not a difficulty also in determining the difference or differentiating symptoms or conditions between tuberculosis and—I don't know what you call it—some sort of a fungus growth on the lungs?

Dr. ANDERSON. Yes. Laboratory work is the only absolute way of distinguishing it.

Mr. SCHWABE. And sometimes surgery finally is the only way to determine it.

Dr. ANDERSON. Yes, sir; to get the specimen.

Mr. SCHWABE. Have you been making any progress with that fungus growth that was formerly confused with tuberculosis?

Dr. ANDERSON. Well, it continues to remain a problem. However, I think it is lessened by the fact that we have better laboratory work being done today.

Mr. SCHWABE. Likewise, with reference to cancer of the lungs, which is much more frequently pronounced as a definite diagnosis than it formerly was, some were inclined to refer to that as tuberculosis many years ago, were they not?

Dr. ANDERSON. I believe so.

Mr. SCHWABE. The differentiation now is much more accentuated, is it not?

Dr. ANDERSON. More precise.

VACCINATION

Mr. SCHWABE. What is this BCG that you talked about?

Dr. ANDERSON. It is a vaccine of living tubercle organisms which have been attenuated so they do not cause pulmonary or other forms of tuberculosis. It has been in existence for about 30 years. However, it has not been shown absolutely to be of good effect. The disaster in Germany where a mistake was made and something that was not BCG was given to children and resulted in death scared a lot of people

away from BCG. However, it has been shown that that was a mistake.

Mr. SCHWABE. Is that a therapeutic?

Dr. ANDERSON. It is not a therapeutic. It is for prevention—strictly and purely for prevention. We undertook to test it under the conditions which exist in the United States in two large-scale studies, one in Puerto Rico and one in Columbus, Ga., in addition to several smaller studies in certain mental institutions in Ohio and in Michigan.

In these programs we have covered about 380,000 persons, vaccinating more than 100,000 of them. The task in front of us is to keep those people under observation a sufficiently long period of time so we know whether BCG was effective or not. We have gone through the first phase of the program.

Mr. SCHWABE. But your efforts are more or less a renewal or revival or former ideas after a lapse of several years in emphasis in research with reference to BCG; is that not true?

Dr. ANDERSON. The work that we are doing on BCG had never been done by anybody, and it did come a number of years afterward.

Mr. SCHWABE. There was an inactive period, so to speak.

Dr. ANDERSON. Yes.

TB HOSPITALS UNDER DIRECT SUPERVISION OF PUBLIC HEALTH SERVICE

Mr. SCHWABE. How many tuberculosis hospitals or sanatoria are under the direct supervision of the Public Health Service at the present time?

Dr. ANDERSON. Two; one in New Mexico and one in New York.

Mr. SCHWABE. Thank you.

Mr. FOGARTY. Mr. Busbey.

RELATIONSHIP OF PUBLIC HEALTH SERVICE WITH MUNICIPAL INSTITUTIONS

Mr. BUSBEY. Doctor, in Chicago we have a rather large municipal tuberculosis sanatorium. What is the relationship between your department and an institution of that kind?

Dr. ANDERSON. There is no direct, formal relationship between us and the Chicago Municipal Tuberculosis Sanatorium. Our relationship is with the Illinois State Department of Public Health.

Mr. BUSBEY. Do you ever have occasion to compare statistics with them or know what they are doing out there in the way of treatment?

Dr. ANDERSON. Yes; we do not do it comparatively, Mr. Busbey. We see their reports. They keep us informed through their reports.

METHODS USED TO COMPILE STATISTICS

Mr. BUSBEY. At the beginning you gave us some figures as to the number of deaths in former years compared to the deaths in 1951, and also the number of active and inactive cases and various other statistics. How do you go about compiling those statistics to arrive at your figures?

Dr. ANDERSON. Those figures are obtained through several different sources. One is the case-finding program, our own and those of State and local health departments. Another that is very useful is the information that we have from sanatoria. Also, an extremely useful bit of

information comes to us from the fact that local health departments have established tuberculosis case registers where they keep the status of every individual who has tuberculosis in their community cataloged. We have helped set up many of those registers.

Mr. SCHWABE. The bureau of vital statistics gives you a lot of it, does it not?

Dr. ANDERSON. In some instances we do get it from the local bureau of vital statistics. In other instances it will be part of the local TB division.

Mr. BUSBEY. Would those figures include the private hospitals that Mr. Schwabe was talking about?

X-RAY FOLLOW-UP PROGRAM

Mr. BUSBEY. This community-wide X-ray program, just how does that operate? You find from your chest X-rays, shall we say, 700 cases in the District of Columbia. What happens then? What is done about them?

Dr. ANDERSON. Those people are all interviewed by nurses and the names of their physicians are obtained and they are referred to their doctors or whatever medical system they might belong to for final diagnosis and for recommendations as to treatment. Is that the question?

Mr. BUSBEY. Yes. I was trying to get at a follow-through. What happens after the determination is made?

Dr. ANDERSON. A check is usually made also to see whether the patient actually went to his physician. Some people—a few will say they are going to go to somebody and then they do not show up. We check up.

Mr. BUSBEY. What happens to them?

Dr. ANDERSON. They are visited by Public Health nurses to determine why it was that they did not go to see their doctor or their clinic. An attempt is made to get them to go.

Mr. DENTON. May I ask a question right there? What do you do in that kind of a case in communities where there are just one or two doctors—not enough doctors to serve the community?

Dr. ANDERSON. In those areas frequently the State health department, where they are operating, will make available the services of a specialist, either from their own staff or from another community, or arrange with the local doctor to send his cases to some specialist in some adjacent community. We also attempt, through postgraduate education courses, to put into the hands of that doctor the knowledge which will enable him at least to arrive at a soundly based diagnosis.

Mr. DENTON. Off the record.

(Discussion off the record.)

Mr. STEPHENS. There is one factor as to Mr. Busbey's question inquiring what happens next. In the District of Columbia I know the Public Health Service has cooperated extensively in examining Government employees by the thousands. The District of Columbia mails a post card after the film has been studied saying that you are O. K. or that it did not come out clearly and asking that you come back for another one. Or, if the picture shows positive, the District of Columbia Health Service really goes after them.

It has been done in our building two or three times in the last 3 years. In my own case, somebody spoke to me just as they clicked the

shutter. I got a post card in a week saying that the film was not O. K. and requesting that I come back and take another one. I was busy here at the time. I ran over to our Public Health Service dispensary and got a large X-ray to be sure. Then these people in Public Health dispensary called the District of Columbia Health Service to put them straight that the result was negative. So they do have a catalog of everybody that has been examined in the District of Columbia—good, bad, and indifferent.

Mr. BUSBEY. What I am really driving at, Doctor, is out of the number of cases that might communicate this disease to someone else, do you find that in most cases they are willing to cooperate 100 percent—and what do you do in those cases when they will not cooperate?

Dr. ANDERSON. Well, in most cases, and by most cases I mean better than 90 percent of the time, if the doctors and nurses that talk to that patient spend enough time telling that person about his condition, that patient will cooperate. There are a few that absolutely will not cooperate no matter what you do. In those instances, the local health authorities can use and in some instances do use their powers for quarantine and isolation to render that individual harmless as far as the rest of the community is concerned. That is being used more and more extensively as the number of beds that we have increases and we can take care of those people.

Mr. BUSBEY. That is all, Mr. Chairman.

PROGRAM COOPERATION WITH STATE STAFF

Mr. DENTON. I would like to ask one question. What does your department do, if anything, in these communities that do not have full-time public health service to see that the State health board carries this program into those communities?

Dr. ANDERSON. We work with the State tuberculosis control officer and his staff. The decision actually as to whether they go in is up to them. In some instances they will not go into the community that does not have some sort of local health services for a follow-up.

Mr. DENTON. Of course, if the State health board did not provide that service, they would not get the benefit of the Government's knowledge on that, would they?

Dr. ANDERSON. If they did not have the service, no.

Mr. DENTON. I am interested in having all communities get the benefit if there is anything that can be done to assure that.

Dr. ANDERSON. In some instances where there are no local provisions, district services will provide for that area. They will have an X-ray program together with a follow-up program by the Public Health nurses to visit the cases found and be sure they get medical treatment.

Mr. DENTON. Off the record.

(Discussion off the record.)

Mr. FOGARTY. Doctor, do you have any change in the language of the bill?

Dr. ANDERSON. No.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

Dr. ANDERSON. No, sir.

Mr. FOGARTY. Thank you very much.

Dr. ANDERSON. Thank you.

TUESDAY, JANUARY 29, 1952.

ASSISTANCE TO STATES, GENERAL

WITNESSES

DR. JACK C. HALDEMAN, CHIEF, DIVISION OF STATE GRANTS
DR. HALBERT L. DUNN, CHIEF, BUREAU OF STATE SERVICES
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

ASSISTANCE TO STATES, GENERAL

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$16,084,000	$15,960,000	$16,692,000
Transferred to "Salaries and expenses, Defense production activities, Federal Security Agency," pursuant to Public Law 253		−20,000	
Adjusted appropriation or estimate	16,084,000	15,940,000	16,692,000
Proposed supplemental due to pay increases		106,000	
Reimbursements from other accounts	12,451	190,898	7,000
Total available for obligation	16,096,451	16,236,898	16,699,000
Unobligated balance, estimated savings	−15,927		
Obligations incurred	16,080,524	16,236,898	16,699,000
Comparative transfer from—			
"Control of venereal diseases, Public Health Service"	89,900	102,200	
"Control of tuberculosis, Public Health Service"	131,921	155,161	
"Engineering, sanitation, and industrial hygiene, Public Health Service"	49,857	56,158	
"Salaries, expenses, and grants, National Cancer Institute, Public Health Service"	38,365	45,000	
"Salaries, expenses, and grants, National Heart Institute, Public Health Service"	25,507	30,000	
"Dental health activities, Public Health Service"	9,400	9,000	
"Commissioned officers, pay, and so forth, Public Health Service"	342,294	350,000	
Comparative transfer to "Salaries and expenses, Public Health Service"	−22,274	−24,000	
Total obligations	16,745,494	16,960,417	16,699,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct Obligations			
1. Grants to States for general health	$13,540,085	$13,500,000	$13,500,000
2. Direct operations:			
(a) Technical assistance to States	2,038,023	2,076,262	2,007,760
(b) Vital statistics	1,025,412	1,055,240	1,048,390
(c) Administration	129,523	138,017	135,850
Total direct obligations	16,733,043	16,769,519	16,692,000
Obligations payable out of reimbursements from other accounts			
2. Direct operations:			
(a) Technical assistance to States	7,196	70,500	7,000
(b) Vital statistics	5,255	120,398	
Total obligations payable out of reimbursements from other accounts	12,451	190,898	7,000
Total obligations	16,745,494	16,960,417	16,699,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Summary of Personal Services			
Total number of permanent positions	616	613	569
Full-time equivalent of all other positions	6	7	5
Average number of all employees	545	564	537
Average salaries and grades:			
General schedule grades:			
Average salary	$3,922	$4,322	$4,382
Average grade	GS–5.9	GS–5.9	GS–5.9
Crafts, protective, and custodial grades:			
Average salary	$2,971	$3,335	$3,357
Average grade	CPC–4.8	CPC–4.8	CPC–4.8
Ungraded positions, average salary	$2,873	$3,085	$3,085
Personal service obligations:			
Permanent positions	$2,528,816	$2,753,285	$2,558,019
Part-time and temporary positions	19,230	23,352	15,792
Regular pay in excess of 52-week base		8,272	8,010
Payment above basic rates	6,378	3,000	3,000
Total personal service obligations	2,554,424	2,787,909	2,584,821
Direct Obligations			
01 Personal services	2,543,412	2,650,307	2,577,821
02 Travel	156,812	188,694	186,150
03 Transportation of things	24,631	11,434	11,434
04 Communication services	14,317	26,490	26,490
05 Rents and utility services	73,677	68,050	68,050
06 Printing and reproduction	43,193	44,475	44,475
07 Other contractual services	22,214	22,620	22,620
Purchase of vital records transcripts	173,050	173,000	173,000
Services performed by other agencies	2,500	2,500	2,500
08 Supplies and materials	53,975	55,949	53,460
09 Equipment	83,472	24,505	24,505
11 Grants, subsidies, and contributions	13,540,085	13,500,000	13,500,000
13 Refunds, awards, and indemnities	9		
15 Taxes and assessments	1,696	1,495	1,495
Total direct obligations	16,733,043	16,769,519	16,692,000
Obligations payable out of reimbursements from other accounts			
01 Personal services	11,012	137,602	7,000
02 Travel	485	20,196	
04 Communication services		500	
05 Rents and utility services	954	27,500	
06 Printing and reproduction		3,000	
08 Supplies and materials		1,700	
09 Equipment		400	
Total obligations payable out of reimbursements from other accounts	12,451	190,898	7,000
Total obligations	16,745,494	16,960,417	16,699,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$254,620	$338,730	$346,360
Obligations incurred during the year	16,080,524	16,236,898	16,699,000
	16,335,144	16,575,628	17,045,360
Deduct:			
Reimbursable obligations	12,451	190,898	7,000
Unliquidated obligations, end of year	338,730	346,360	392,000
Adjustment in obligations of prior years	9,144		
Obligated balance carried to certified claims account	2,588		
Total expenditures	15,972,231	16,038,370	16,646,360
Expenditures are distributed as follows:			
Out of current authorizations	15,800,759	15,600,000	16,300,000
Out of prior authorizations	171,472	338,730	340,000
Out of anticipated 1952 supplemental for pay increases		99,640	6,360

Disease and Sanitation Investigations and Control, Territory of Alaska

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,234,000	$1,211,129	$1,230,000
Proposed supplemental due to pay increases		19,000	
Total available for obligation	1,234,000	1,230,129	1,230,000
Unobligated balance, estimated savings	−3,296		
Obligations incurred	1,230,704	1,230,129	1,230,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Special grant to Alaska for general health purposes	$694,000	$630,000	$630,000
2. Direct operations:			
(a) Technical assistance to Alaska	118,836	132,915	133,000
(b) Field and laboratory investigations	361,200	405,014	405,000
(c) Administration	56,668	62,200	62,000
Obligations incurred	1,230,704	1,230,129	1,230,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	71	75	75
Full-time equivalent of all other positions	2	4	4
Average number of all employees	65	70	70
Average salaries and grades:			
General schedule grades:			
Average salary	$4,017	$4,380	$4,364
Average grade	GS–6.4	GS–6.3	GS–6.3
Crafts, protective, and custodial grades:			
Average salary	$2,519	$2,859	$2,859
Average grade	CPC–4.3	CPC–4.3	CPC–4.3
Ungraded positions:			
Average salary	$4,387	$4,389	$4,389
01 Personal services:			
Permanent positions	$302,550	$340,900	$340,900
Part-time and temporary positions	6,821	11,100	11,100
Regular pay in excess of 52-week base		900	900
Payment above basic rates	71,807	80,400	80,400
Total personal services	381,178	433,300	433,300
02 Travel	47,521	48,600	48,500
03 Transportation of things	10,846	13,200	13,200
04 Communication services	2,335	2,500	2,500
05 Rents and utility services	36,389	44,329	44,300
06 Printing and reproduction	405	700	700
07 Other contractual services	9,004	9,000	9,000
08 Supplies and materials	35,828	36,500	36,500
09 Equipment	12,821	11,300	11,300
11 Grants, subsidies, and contributions	694,000	630,000	630,000
15 Taxes and assessments	377	700	700
Obligations incurred	1,230,704	1,230,129	1,230,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$111,202	$153,882	$134,269
Obligations incurred during the year	1,230,704	1,230,129	1,230,000
	1,341,906	1,384,011	1,364,269
Deduct:			
Unliquidated obligations, end of year	153,882	134,269	135,000
Adjustment in obligations of prior years	8,573		
Obligated balance carried to certified claims account	1,829		
Total expenditures	1,177,622	1,249,742	1,229,269
Expenditures are distributed as follows:			
Out of current authorizations	1,096,241	1,078,000	1,095,000
Out of prior authorizations	81,381	153,882	133,129
Out of anticipated 1952 supplemental for pay increases		17,860	1,140

Mr. FOGARTY. The committee will come to order.

The committee has before it this morning the estimate of the Public Health Service for the appropriation item, "Assistance to States." Dr. Haldeman, have you a statement for the committee?

GENERAL STATEMENT

Dr. HALDEMAN. Yes, sir. Mr. Chairman, the appropriation entitled "Assistance to States" generally carries funds for a variety of activities which are carried out cooperatively with State and local health departments. It supports the basic services which are essential to the operation of all health programs. It also assists individual control programs not included in other specialized grant-in-aid appropriations.

FUNDS REQUESTED ALLOW NO INCREASE IN STATE GRANTS

Of the $16,692,000 requested under this item for 1953, $13,500,000 are made available to the States in the form of direct grants. The request in the form of direct grants in 1953 is the same as was made available to the States for the current fiscal year.

HOW GRANTS ARE UTILIZED BY STATES

The States utilize these grants together with their own State appropriations for a variety of activities. These include:

1. Routine laboratory and epidemiological services or investigations to assist physicians and health officers in the diagnosis of diseases.
2. Occupational health services.
3. Professional sanitary engineering services.
4. Nutritional services.
5. They also assist in helping to employ physicians and nurses and other technical personnel to assist in the development of local health services. They assist in the training of State and local personnel. These funds are also used to assist local health departments to employ physicians, nurses, sanitation personnel, health educators, clerks, and other personnel to carry out the program in local communities.

Although these services lack the drama of research and other specialized health programs, they are fundamental, and they contribute

substantially to the high level of health the American public enjoys today. They are also characterized by flexibility which makes them particularly valuable to the States. This kind of distribution allows the State health officers to attack the problems in their own areas since they can be used for various purposes.

PROBLEMS ARISING FROM DEFENSE EFFORT

We are again confronted with increasing problems in defense impact areas. These are not so acute as in the First or Second World War. But they arise from the influx of population in the communities whose health services are not equal to the additional load.

I would also like to emphasize that in time of disaster or national emergency the State and local public-health structure which these funds support becomes the framework around which emergency health and environmental sanitation services are built. This structure also plays a major role in the Nation's planning for civil defense.

The coverage of the country with full-time health units is essentially the same as last year.

PROGRAM FOR TECHNICAL ASSISTANCE TO STATES

I would now like to refer to those activities carried out as direct operations of the Public Health Service under the title "Technical assistance to States." Included here are funds for the operation of the basic staff of our 10 regional offices. This staff consists of our regional medical director, regional medical consultant, regional sanitary engineer, regional public-health nurse, and public-health analyst, and their supporting staff.

These regional office personnel are quickly and easily accessible to State and local officials and maintain a better acquaintance with local problems than would be possible with a centralized administration.

The regional office staff reviews the budgets of the several States, and the Surgeon General has delegated to them the approval of the plans and budgets.

TRAINING PUBLIC-HEALTH WORKERS

I think this committee is aware of the shortage of trained public-health workers in the country. One of the most useful types of technical assistance which the Public Health Service can give is the field training of public-health workers. We have developed, in cooperation with the States, a train-by-doing program which speeds up the time necessary to train public-health workers. This field training is provided at the Communicable Disease Center in Atlanta and the Environmental Health Center in Cincinnati—also in seven field regional training centers which serve sections of the country in which they are located: Amherst, Mass.; Buffalo, N. Y.; Columbus, Ga.; Bloomington, Ill.; Topeka, Kans.; Denver, Colo.; and Pittsburgh, Pa.

Among the types of training offered, the field training in sanitation predominates. There are general courses in environmental sanitation for sanitarians and sanitary engineers; and specialized training in rodent control, insect control, and in housing. There are courses in the bacteriological examination of water, food, and milk; and in the analysis of polluted water and industrial wastes.

DEMONSTRATIONS AND FIELD STUDIES

The item "Technical assistance to States" also includes funds for demonstrations and field studies. The purpose of these studies is to discover and develop ways and means of providing better public-health control of various diseases, particularly chronic diseases.

An example of this program is the program of physical medicine and rehabilitation carried out at Gallinger Hospital. This is a cooperative project with the District of Columbia Health Department and the District of Columbia Rehabilitation Service. In this program we particularly were interested in the extent to which patients receiving this type of service will spend less time in the hospital and will more nearly achieve maximum functional, social, and economic independence. Patients benefiting from this type of service have various types of physical disability, but a large percentage are victims of accidents, amputees, or spinal-cord-injury patients, arthritis, and polio patients. An examination of the progress of the programs in this field may be illustrated from the fact that since the program was started the average stay for orthopedic cases has been reduced by 50 percent; and on physical medical services from 99.5 days to 27.4 days.

HOME-CARE STUDIES

Closely allied with this project is another pilot study of the organization and operation of a program for home care. In this program the objective is to determine the extent to which home care can be made to substitute for the hospital care of patients who are not ambulatory. A lot of these patients are the kind I described under the rehabilitation program, but many of them are cancer cases, or patients who are paralyzed following a stroke or spinal-cord injury, or severe cardiac cases, who can satisfactorily be taken care of in the home if there is someone in the home to take care of them and if the mobile equipment and service of the hospital can be brought to them.

The philosophy is that services of the hospital that are mobile can furnish service in the home. Personnel visiting the home include nurses, physiotherapists, occupational therapists, medical social workers, or housekeeping aides. For instance, the nurse assists by coming in once or twice a week to teach the family how to take care of the patient and how to prevent bed ores. The housekeeping aide may come in once or twice a week to let the person taking care of the patient take an afternoon off. Also, laboratory technicians can come in and make examinations, and mobile equipment such as a hospital bed can be loaned to the patient.

Our experience to date indicates that this type of service can be given for an average of about $2.75 per day as compared to the average hospital cost of $13.50 a patient-day. I think it holds a great deal of promise of replacing the hotel services of hospitals. Certainly, most of the patients would prefer to be taken care of at home.

I also think that this type of service supplies a good deal of future from the standpoint of patients now currently in hospitals who are bedridden patients being taken care of in our homes throughout the country today.

IMPROVED SCREENING TESTS

With respect to the early detection of disease, the Public Health Service is improving its work of validating and improving the screening tests which are basic to large-scale case-finding procedures.

One of the unsolved problems in this field is the refining of screening procedures to reduce to a minimum the number of false positives and false negatives. False positives result in unnecessary expense to follow up with a private physician, and false negatives give the patient a false sense of security.

In this project a random sample of patients presenting themselves at the out-patient department are given various diagnostic tests. Those with positive findings were given very complete physical examinations. A control group who had no positive tests were also given complete physical examinations. In this study we are interested in obtaining the answers to three questions:

1. How many with positive tests actually had the disease?
2. How many with negative tests did we miss that we tested for?
3. What disease conditions did we miss because we did not test for them?

In the field of diabetes control we have already developed a relatively simple test for the detection of the disease. We have also techniques for the training of professional workers in diabetic control. And patient detection material has been developed which has had a widespread use in the country. We are planning to continue our cooperative work in Dallas, Tex., and Oxford, Mass., where groups of people are being used for detection of diseases.

The next item in this appropriation is that for the transcription, analysis, and publication of vital statistics. Dr. Dunn is with me, and I would like for him to speak of this activity.

Mr. FOGARTY. We will be glad to hear Dr. Dunn.

VITAL STATISTICS

Dr. DUNN. I would like to say a few words as to what vital statistics are and what they are used for.

They come from vital documents, marriage certificates, death certificates, and marriage and divorce certificates. They are also concerned with communicable-disease reports from doctors reporting about contagious diseases.

It is chiefly concerned with, first, how many of these things there are and in what localities they occur, and then what are the causes of death and what is behind the deaths in different localities. On the marriage and divorce side you can think of marriage and divorce as the birth and death certificates of the family. Divorce is going up all the time. It is a mental-hygiene problem, and definitely a problem which should now concern the country—the matter of breaking up the homes.

You will find that almost every program of the Public Health Service which you are reviewing is using vital statistics. They enter into the plans, into the controls of the programs. For instance, just this last week I had top officials from the National Safety Council in the office and they are laying out their accident controls. They were trying to get a very maximum check on vital statistics figures.

When a program is pretty well along, then it is the question of evaluating. That is all a vital statistics operation.

The matter of communicable-disease reporting has been very essential, particularly in these disturbed times like we are in. We have thrown a lot of our energy into improving communicable-disease reports in collaboration with the epidemiologists of the country, and they have been working with us to get common standards of practice throughout all the States.

DEVELOPMENT OF EPIDEMIC INTELLIGENCE SERVICE

Then, we have worked toward developing something brand-new, which is called epidemic reporting, a sort of epidemic intelligence service. That material is gathered each week and distributed to the people who can do something about these health problems in terms of their control programs.

VARIOUS USES OF VITAL STATISTICS

It is not only the Public Health Service and health activities on local and State levels but also other agencies that depend on vital statistics. The Children's Bureau bases its infant and maternal health program upon it. One of the greatest users in the Census Bureau. They take the census once every 10 years but they also have the job of population estimates, and I went over all sorts of statistics for localities and manpower purposes. For all of these we have to keep up our birth and death figures, so they can put births in and take deaths out in making their population estimates.

Among some of the biggest users are businessmen—the food industry, infant and children's goods industry. They are practically dependent on the weekly figures for market analysis. They distribute baby foods to the various parts of the country where the birth rate is rising. The undertakers use deaths and death rates from cities to order caskets.

Vital statistics are interwoven into our American life.

Now, how are they processed? There are 1½ million death certificates and 3½ million birth certificates a year. We get copies of these from the States in order to produce the national figures. Since these certificates are coming from localities and States, we cooperate with them on problems of registration to make this material better and to help the States.

In marriage and divorce the load is about half as big. Two million marriages and 500,000 divorce certificates. We do not get these as individual certificates. All we get is total counts. We ought to get more than counts, to give the data more meaning.

The States are trying to step up the mechanism to solve that problem, and State health officers are getting the certificates of marriage and divorce into State offices. Thirty-five States have done this. It is hoped that when that process gets farther along we can get the same analysis of the marriage and divorce problem as we have of the birth and death problem.

We have to report a real lag in our work. We have dropped behind about 4 months. That is due to the rising prices and to the fact that some of the cyclic load in our work requires things to be done following the census. We are hoping not to drop farther behind.

REPORT OF ACHIEVEMENTS

We have at least two real achievements to report. One is the matter of epidemic reporting which is growing up to be something to rely on. If biological warfare hits America, we have to get early reports of epidemics. The other is that the recent birth registration test shows a very real advance has been made in improving the completeness of birth reporting. Ten years ago it was about 92 percent. Now it is 98 percent. So, probably in most areas this difficulty has been solved.

SOURCES OF STATISTICAL INFORMATION

Mr. DENTON. Where do you get the figures?

Dr. DUNN. We get microfilm copies of the birth and death certificates and then put them on cards and tabulate them.

Mr. DENTON. The divorce records?

Dr. DUNN. We do not get them. All we get is the total count by cities and by States. We do not get it for the whole country. We get no internal analysis of the marriage and divorce statistics. This is a serious gap.

Mr. DENTON. Is there any county officer that accumulates these?

Dr. DUNN. For the most part they are gathered in the county clerk's office, which is not concerned with the statistical picture. Consequently, the records vary greatly in their contents.

Mr. DENTON. Do the clerks send them to you?

Dr. DUNN. No. The State officers are trying to collect copies of them in their offices so we can build the same sort of statistics for marriage and divorce as we do for birth and death.

Mr. DENTON. It would be quite a task.

Dr. DUNN. The records are already in the county clerk's hands in most instances.

Mr. DENTON. But he has to go through the audit book and the marriage records.

Dr. DUNN. Thirty-five States have made arrangements with the counties to get copies of marriage certificates when they are filed. Twenty-seven States have made arrangements to get copies of certificates of divorce.

Mr. DENTON. How do you get this information on communicable diseases?

Dr. DUNN. That comes in from the doctors to the local health officers, and then from the State officers to us. We get this only as statistical information. The State officers have individual reports in most instances. I think that gives you a picture of what it is all about, sir.

REIMBURSEMENT

Mr. FOGARTY. Dr. Dunn, do you get reimbursed for any work you do in your division?

Dr. DUNN. We do get reimbursed for work on tabulation which we do for other divisions of the Service.

Mr. FOGARTY. In 1952 how much do you expect to get?

Mr. THOMPSON. In 1952 the anticipated reimbursement is $120,398.

AMOUNT REQUESTED FOR ADMINISTRATION

Dr. HALDEMAN. The final item is that for administration, which amounts to $135,850.

A little less than 1 percent of this total is used for the management function associated with the administration of the program.

This completes my statement, and I will be glad to attempt to answer any questions.

TOTAL AMOUNT OF BUDGET REQUEST

Mr. FOGARTY. You say $16,769,000 is estimated to be available in 1952 and you are asking for $16,692,000 in 1953, which shows a reduction of $77,000.

Dr. HALDEMAN. Yes.

Mr. FOGARTY. 613 positions in 1952 and 568 in 1953, a reduction of 45 positions. These 45 are 26 out of "Vital Statistics" and the balance out of "Technical assistance to States."

Dr. HALDEMAN. That is correct.

EXPLANATION OF COMPARATIVE TRANSFER ITEM

Mr. FOGARTY. What is this transfer of $647,000?

Dr. HALDEMAN. That is comparative transfers from other public-health appropriations for the consolidation of our regional office basic staff.

Mr. FOGARTY. Why should we have such a large amount being transferred to this appropriation?

Mr. THOMPSON. Mr. Chairman, the regional office structure of the Public Health Service has been financed by a large number of appropriations; and that necessitated, of course, multiple financing of the basic staff. It was felt we could pull the whole basic staff together to show it in one place and also to have the financing in one appropriation.

Mr. FOGARTY. You mean when you come back next year you won't show this transfer?

Mr. THOMPSON. No, sir.

Mr. FOGARTY. It will be included in your estimate for 1954?

Mr. THOMPSON. That is correct.

DISTRIBUTION OF COST BETWEEN FEDERAL AND DISTRICT OF COLUMBIA GOVERNMENTS FOR REHABILITATION PROJECT

Mr. FOGARTY. Doctor, you gave as an example of the work you are doing this rehabilitation project with Gallinger Hospital. Will you tell the committee just how much that is costing the Federal Government, and how much is the contribution of the District Rehabilitation Service and Gallinger Hospital, so we can get some idea of what is being spent by the three divisions in money and personnel.

Dr. HALDEMAN. I can give you the amount budgeted for the rehabilitation program during 1952 by the Public Health Service. This amounts to $81,525. Some of this goes into the analysis of data which is obtained in the study. It is not directly related to the Rehabilitation Service itself. The contributions by the Health Depart-

ment I cannot give you at this time. I shall be glad to supply it for the record.

Mr. FOGARTY. I wish you would, so we can get some comparison of the relative contributions of the three groups that are interested.

(The information referred to follows:)

Financial participation in physical medicine and rehabilitation project, 1952—Gallinger Hospital, Washington, D. C.

Agency	Positions	Amount
U. S. Public Health Service	5	$25,452
District of Columbia Health Department (Gallinger Hospital)	6	24,445
District of Columbia Rehabilitation Service	3	12,810
Total	14	62,707

Mr. FOGARTY. Are there any private organizations sponsoring this project?

Dr. HALDEMAN. No.

Mr. FOGARTY. No voluntary groups coming in?

Dr. HALDEMAN. No.

PROPOSED GRANT TO STATES ALLOCATIONS

Mr. FOGARTY. In total, your grants to States are the same as for 1952. Where is your proposed 1953 breakdown by States?

Dr. HALDEMAN. I have one which I can submit for the record.

Mr. FOGARTY. Will you put that in at this point, along with similar figures for 1951 and 1952?

(Statements referred to are as follows:)

Allocations of grant-in-aid funds for general health, fiscal years 1951 and 1952, and tentative allocations for 1953

State or Territory	Allocation, 1951	Allocation, 1952	Tentative allocation, 1953
Alabama	$378,800	$403,300	$410,000
Arizona	95,000	96,100	98,600
Arkansas	283,000	262,900	260,400
California	662,500	642,800	684,500
Colorado	125,200	129,000	132,200
Connecticut	129,900	129,000	128,800
Delaware	22,600	23,800	23,300
District of Columbia	57,900	49,400	49,500
Florida	233,200	261,700	272,200
Georgia	379,600	410,700	412,500
Idaho	80,600	77,400	77,700
Illinois	550,600	563,300	549,600
Indiana	326,900	314,300	311,000
Iowa	238,900	220,400	213,400
Kansas	186,500	181,700	176,000
Kentucky	368,600	360,600	361,400
Louisiana	306,900	308,400	304,000
Maine	97,900	101,000	100,700
Maryland	156,900	170,300	176,400
Massachusetts	339,000	337,300	332,200
Michigan	467,100	464,300	462,700
Minnesota	276,300	262,500	257,500
Mississippi	350,500	344,800	348,400
Missouri	351,600	335,400	326,700
Montana	64,300	69,700	70,100
Nebraska	136,500	134,100	131,600
Nevada	39,300	38,800	38,900
New Hampshire	57,600	54,300	53,500
New Jersey	322,300	319,000	317,600
New Mexico	89,500	101,900	99,400

Allocations of grant-in-aid funds for general health, fiscal years 1951 and 1952, and tentative allocations for 1953—Continued

State or Territory	Allocation, 1951	Allocation, 1952	Tentative allocation, 1953
New York	$860,100	$872,800	$874,400
North Carolina	475,500	492,800	486,600
North Dakota	74,400	76,300	76,900
Ohio	577,300	570,600	571,000
Oklahoma	270,500	248,600	239,800
Oregon	159,700	132,600	141,400
Pennsylvania	827,300	778,100	777,400
Rhode Island	54,100	58,800	57,300
South Carolina	275,000	282,100	280,800
South Dakota	77,500	79,800	80,300
Tennessee	370,800	383,200	389,400
Texas	718,800	727,600	713,900
Utah	89,100	88,800	89,800
Vermont	46,600	47,400	46,600
Virginia	305,300	331,000	334,900
Washington	187,500	182,600	179,900
West Virginia	209,400	212,400	211,500
Wisconsin	272,700	274,400	272,000
Wyoming	51,900	50,400	50,000
Alaska	50,800	49,000	50,300
Hawaii	52,400	46,500	45,100
Puerto Rico	351,500	339,400	343,200
Virgin Islands	6,800	6,600	6,700
Total	13,540,500	13,500,000	13,500,000

NEW CARS FOR REPLACEMENT

Mr. FOGARTY. You are asking for 14 new cars. Are they just replacements under the formula?

Mr. HARLOW. Yes, sir.

Mr. DENTON. I didn't get clear in my mind the reason for the transfer of $747,519. Just what does that represent?

Mr. THOMPSON. At the present time there are a number of employees that are financed from various appropriations of the Service. These employees constitute the basic regional-office staff, located in the 10 regional offices. These personnel and the funds that support their activities are being transferred into this appropriation.

Mr. DENTON. One question I intended to ask Dr. Scheele. How old is the Public Health Service?

Mr. HARLOW. It began in 1798.

Mr. DENTON. Was it just primarily to take care of the marine hospital at that time?

Mr. HARLOW. I think the first Government hospitals for the care of seamen at that time were the only hospitals for both the Navy and the merchant fleet.

Mr. DENTON. That is all.

FURTHER EXPLANATION OF COMPARATIVE TRANSFER

Mr. SCHWABE. I am not clear on this comparative transfer item shown in the justification on page 24, $747,519. I understand what you have said, but then I also note that this item of $753,600 in the committee print, page 62, is explained in the footnote, which says, "for activities previously carried under appropriations as follows." Then the names are itemized, respectively, for control of venereal diseases, tuberculosis, engineering sanitation, and so forth, the big item being $350,000.

I think we are entitled to a little clearer explanation. I feel I want a more comprehensive explanation of that situation.

Mr. HARLOW. Do you want me to answer that?

Mr. SCHWABE. Whoever wants to offer the explanation; I am not particular.

Mr. HARLOW. Mr. Chairman, our field programs and our services are administered in some instances, a great many instances, through the regional-office structure of the Federal Security Agency. The people who deal with the States in connection with the Hill-Burton Act program are based on the regional offices. The people who deal with the States in federally controlled activities are based on regional offices.

Mr. SCHWABE. You mean go through regional offices?

Mr. HARLOW. They work out of regional offices and make their contacts with the States from the regional offices.

Mr. SCHWABE. You mean from the location or the building or the particular office or through the personnel of the regional office?

Mr. HARLOW. They are the personnel of the regional offices. Yes, sir. That is true of all these programs where we have relations with the States and, of course, in the public-health activities that comprise the bulk of our operations. About the only exceptions would be the marine hospitals and to some extent the quarantine service.

The National Heart Institute deals with the States through the national regional offices; so do the Mental Health Institute and the Cancer Institute. The activities about which Dr. Haldeman has just been talking and all these activities of which I have been speaking have had their representatives in the regional offices. So what we have done is to pull together all the money represented by the salaries and other expenses of these regional-office people and put it into this one appropriation.

COMPARATIVE TRANSFER SIMPLIFIES ADMINISTRATIVE OPERATION FOR REGIONAL-OFFICE EXPENSES

The advantage from our point of view is almost purely administrative, and it gives us one fund with which to make all our payments for the salaries and expenses of these people instead of having to pay them out of 10 or 12 appropriations.

Mr. SCHWABE. Under this new plan that you are now seeking to have us approve, you would apportion this money as you see fit to these various persons employed and not necessarily to those in connection with venereal-disease work or the Cancer Institute or some other field. Is that right?

Mr. HARLOW. That would be possible.

Mr. SCHWABE. There will be more latitude allowed to the Public Health Service and a much more elastic operation than under the present system?

Mr. HARLOW. Correct, sir.

Mr. SCHWABE. Then when we appropriate from now on we do not know how much of this is to be allotted to any one of these particular fields of activity?

Mr. HARLOW. No, sir.

Mr. SCHWABE. After we make a lump-sum appropriation under this item it will be left for the Public Health Service to make the allocation?

Mr. HARLOW. Yes, sir.

Mr. STEPHENS. Mr. Schwabe, can I just add a little there.

Mr. SCHWABE. Yes.

Mr. STEPHENS. In the operation of these regional offices which you heard Mr. Harlow discussing, we have a grade 5 clerk who makes a payroll and he charges three to tuberculosis and two or three against engineering sanitation, and so forth. He has a very difficult task to keep up with the different ramifications of the several activities of Public Health. In this way Public Health charges one-tenth here and another fraction somewhere else; and that clerk pays all the people out of different funds. These items you have read from—that make up this $747,519—that amount is not an increase, you will find corresponding decreases in each one of these appropriations for a like amount as listed in the footnote of your table.

It simplifies the actual clerical work in regional offices. Public Health has made quite a contribution to simplifying this work by saying to the regional office: Here is the money for your group. The regional payroll clerk makes one account current and one payroll and charges it to one account. It is, as Mr. Harlow has said, a simplification of administration and in no sense intended to broaden their authority.

Mr. SCHWABE. There are a lot of these people who do more than one service. Are there some who to a multiplicity of services or a variety of services?

Mr. STEPHENS. The regional medical director is on all of the Public Health programs.

Mr. SCHWABE. That is what I am talking about.

You do not need a regional director for venereal disease and a separate regional director for tuberculosis and for each one of these other items. There may be instances where there is a necessity for a separate personnel, but generally when you speak of a regional director you are considering one with over-all authority in the handling of the administrative work within the region, it seems to me.

Mr. HARLOW. I am afraid, Mr. Schwabe, I have given you an erroneous impression. In this staff that we propose to put within the $747,519, there are 10 regions. It averages only $75,000 per region.

Mr. SCHWABE. That is for fiscal 1952?

Mr. HARLOW. It averages around $75,000 a region and does not include what we refer to as the program people. The staff will be paid out of that fund and consists of the regional medical director, the regional sanitary engineer, the deputy medical director, and the nurse consultant—what we refer to as a health-program representative—and two staff assistants, together with stenographic and clerical services that go with these people.

They have general consultative and supervising functions for all the Public Health services activities carried on in their area. However, people who will actually be running these programs will be paid, as heretofore, from the program appropriations.

Mr. SCHWABE. I think you confused me still further. I am sorry.

Mr. HARLOW. I am sorry, too.

Mr. STEPHENS. Let me elucidate his points this way.

In hospital-construction activities, if you appropriate money for that in each region, there is a hospital-construction man in charge of that program. He is paid out of that program. The work of him

and others is coordinated by this small group of people who are Public Health Service. The same thing applies to school construction. We have these people in the regions who are paid out of the appropriation for school construction, Office of Education, and so forth.

Water-pollution people may have engineers in there and their work is coordinated by this $75,000 regional staff that Mr. Harlow has mentioned.

Mr. HARLOW. I might say, Mr. Chairman, we are not particularly overly anxious to put this arrangement into effect. It just seemed to us to be a better administrative procedure in handling these regional office expenses. We would be perfectly satisfied to leave it as it is as far as that is concerned.

PURPOSE OF GATHERING STATISTICAL DATA ON MARRIAGES AND DIVORCES

Mr. SCHWABE. Very well. With reference to this vital statistics program that the gentleman spoke about a while ago. I want to explore that a little further.

In the first place I want to ask you to tell us what is the special interest that your bureau or division has and of what especial interest is it to the Public Health Service to know the number of divorces granted or the number of marriages contracted. What explanation can you offer as a justification for spending money to determine these facts statistically?

Dr. DUNN. Originally, the vital statistics function was a function of the Census Bureau and was transferred by the Congress. The vital statistics go together, with marriage and divorce as a part of them.

Mr. SCHWABE. As undertaken originally, vital statistics included only births and deaths?

Dr. DUNN. And marriage and divorce.

Mr. SCHWABE. Has it always included them?

Dr. DUNN. Yes. Since the beginning.

Mr. SCHWABE. It is not so included in the laws of the several States regulating the compilation and collection of vital statistics.

Dr. DUNN. It varies from State to State but many States have thought of that as part of the functions. The reason is that it is the most economical way to gather these statistics.

Mr. SCHWABE. What is the most economical?

Dr. DUNN. Centralization in one vital statistics unit, because it is the same kind of process. It comes from a registered document. These documents are essentially handled in the same way.

Mr. SCHWABE. What is there in a marriage certificate that assists the Public Health Service in any way whatever?

Dr. DUNN. In connection with marriages specifically, of course, the States have the responsibility in connection with blood testing.

Mr. SCHWABE. In only a few States.

Dr. DUNN. Primarily premarriage blood tests for venereal diseases.

Mr. SCHWABE. And that is only of very recent origin, comparatively?

Dr. DUNN. We are deeply interested in the family as a unit.

Mr. SCHWABE. I understand that. That is sociological.

Dr. DUNN. We are deeply interested——

Mr. SCHWABE. But I am talking about from the standpoint of the Public Health Service. What is there in a controlled survey that you

get out of it that will do you any good at all or reflect any information that can be used by the Public Health Service? Name one instance.

Dr. DUNN. Are you talking about the birth certificate?

Mr. SCHWABE. I did not intend to. The marriage certificate?

Dr. DUNN. The marriage certificate adds one big factor in the analysis of the mental-hygiene problem—the break-up of families.

Mr. SCHWABE. What is there in the application, say, or a marriage certificate itself, or both of them taken together, that will reflect any information whatever that will be of value to the Public Health Service?

Dr. SCHEELE. May I answer?

Mr. SCHWABE. I have seen them in nearly all of the States. Certainly you may, Dr. Scheele.

Dr. SCHEELE. I do not think it has any great value to the Public Health Service directly. We are interested, like everyone else, in knowing whether the trends on marriage and divorce go up or down. On the other hand, we have not many Public Health people interested. Industry is interested in marriage statistics because they need estimates on how many people will need new living room suites and so forth.

Mr. SCHWABE. Well, Public Health is getting pretty far afield.

Dr. SCHEELE. On the other hand, every modern country and even the backward countries are interested in gathering statistics on these subjects and, because every one is interested in marriage and the breakdown of marriage. It becomes simple to have these go through the same county and State offices and the mechanism happens to flow through Dr. Dunn's organization in the Public Health Service. I would say the marriage and divorce data are of more service to the country at large than to the Public Health Service.

Mr. SCHWABE. It becomes a sociological and an economic problem of benefit more than any service that I can see that is rendered to the Public Health Service.

Dr. SCHEELE. I agree. We know families break up. We have a mental health problem. We want to do something about it.

Mr. SCHWABE. My point is that there is nothing in most of the applications for marriage licenses that will reflect anything as to the health of the applicants. There is not anything in the marriage certificate that reflects anything whatever so far as I have seen and these are made a matter of record. That is, the certificate is in various offices. Some States designate one and some another. It is a simple thing to determine how many people are married. The newspapers which publish that can tell you how many marriage licenses were issued.

Then, as to divorce, it comes through a different office generally—through the courts and as to the grounds of divorce. We all know that there is not any value to the Public Health Service to be obtained from reading the divorce decree. I say this after 42 years of practicing law. There is not anything in that that will help or determine one iota. They keep out everything that might be of value out of deference to the people involved.

Now, there is also an easy access to the record of the number of divorces granted. The courts of record where these divorces are granted. So, it is easy to determine how many marriage licenses were issued and how many divorces for any particular period of time.

I was just trying to relate this, if I could, to some services that it would be to the Public Health Service. As to the Bureau, I have always referred to the Bureau of Vital Statistics as statistics of births and deaths. With reference to births, there is generally, and in practically all the States a local gathering agency which transmits them to the State public health organization or State bureau of vital statistics, whatever name may be used. It seems to me that it is not much of a problem for your division of our Government to obtain the total number of births and deaths. The doctors who attend, in most States, in the last illness have to certify to the cause of death and the date and so forth, and the undertaker has certain obligations so we get a pretty accurate compilation of these through 48 bureaus. Isn't that true?

Dr. DUNN. There are great difficulties between——

Mr. SCHWABE. Sure, you can have a form. You want something on this form and on the next form and tomorrow you want to change it and the theory develops that you must get a little more information here. But after all there is very little information needed and you can get it all in half a dozen blanks that are on death certificates.

Dr. DUNN. The blank only has a few questions on it.

Mr. SCHWABE. Certainly. So, you don't get anything else authentic. It is simply to obtain that information. I would like you to show us where you are giving the taxpayer any benefit and particularly the Public Health Service. I do not think you have done it.

Dr. DUNN. On marriage and divorce we only get counts.

Mr. SCHWABE. Sure. But you went on with a long rigmarole here about forms and various reports. That does not amount to a hoot as I see it. It is only the number of licenses issued for people to become joined in wedlock and the number of divorces. What else is there authentic that you get?

Dr. DUNN. That is all we get.

Mr. SCHWABE. And any ordinary person of clerical status could get that. Couldn't he get it by correspondence?

Dr. DUNN. That is the way we get it—through correspondence.

Mr. SCHWABE. That does not take a passel of employees to get that nor a lot of coordination. If I am wrong, tell me.

Dr. SCHEELE. Mr. Schwabe, I should say this, not in defending the money that it there but in our pointing to some of the wonderful things that the National Office of Vital Statistics and Dr. Dunn have been doing. I am talking, not about marriage and divorce statistics, but about the data on cause of death. Many people take the view that the statistics or reports from the doctors are uniform and complete in terms of listing of causes of death. It has been a constant uphill battle of local registrars and local health officials to improve reporting. In many cases registrars are only a post office in a sense. They merely receive a report and pass it on and receive a 25-cent or 50-cent fee. They send it on to the next fellow.

Sometimes a certificate does not give any information or it may say "heart failure." Well, we all die of heart failure. There has been a constant effort at county, city, State, and National levels through Dr. Dunn to make the vital statistics on causes of death more meaningful. To approach 100 percent reporting on deaths has been the great struggle. World statistics are not too comparable.

Mr. DENTON. They are careless in reporting.

Dr. SCHEELE. And sometimes they do not know.

Mr. DENTON. And are not to be blamed.

Dr. SCHEELE. These are fundamental questions. There has been this constant effort, and one of the things I have very much enjoyed in the last 3 years since I have been Surgeon General is the growth of a real State and Federal organization of Vital Statistics people led by Dr. Dunn. People in this organization are fighting hard throughout the entire country to make vital statistics work better. That is a hidden value in his program which I think you could only get in a warm way from some of the State people if you talk to them yourself.

If you check back in your State capital, they will tell you with a great deal of pride what has been happening in this field. Dr. Dunn has gone beyond saying: Just report once a month or once a week on forms and take what you get and put them in the mails. An effort has been made to——

Mr. SCHWABE. To make it a great intelligent report.

Dr. SCHEELE. And there is another side to the story.

We are interested in communicable diseases and we get telegraphic reports on certain things, as you know. These are times in the communicable diseases where we face a possible crisis every day. One of the ways in which we might be attacked—and they can do it subtly—is by bacteria placed in our water supplies, contaminating them and doing a variety of other things. The only way we are going to be on top of the situation is by being alert.

One of the major functions of Dr. Dunn's office has been developed in the last year. That is to get this reporting set-up on a speedy and good basis so that if any unusual event happens it would not be discovered 6 weeks later when the damage was done, but soon enough so that flying squads can go into the locality with State officials to take action to head off an epidemic.

In that area alone we have an activity which requires people, and it is time-consuming. Further, Dr. Dunn's program helps in our effort on some world control of disease. I just learned of an outbreak of 700 cases of influenza in a military installation near Washington. We have linked ourselves through the World Health Organization with the health center of Dr. Andrews of England. We are exchanging information rapidly on outbreaks of influenza, particularly the identification of the strain of virus involved.

So here again in watching the vital statistics collected around the world, Dr. Dunn is performing something more than a mechanical operation of having adding machines come out with figures. He is working to get in reports that are meaningful.

We do have means of preventing influenza if the vaccines used are made from the virus causing the outbreak. Last year, when we thought a pandemic of influenza might occur, we took the virus received from Dr. Andrews in England and passed it on to manufacturers to see how fast they could make one liter of vaccine, and we were pleasantly pleased with the response. Some of the manufacturers had the material made in a couple of weeks or less.

Dr. Dunn's unit plays a vital role in the whole area of epidemic intelligence. So it is in this area that his strength lies rather than in tabulating national marriage and divorce statistics.

Mr. SCHWABE. I picked on these others because I think he emphasized them a little in his testimony and probably overemphasized them.

Dr. SCHEELE. He has collected them.

Dr. DUNN. Altogether we have three people on marriage and divorce statistics.

Mr. SCHWABE. I do not know whether you need 1 or 10, but if you have any considerable number it is more than you need.

I have another situation I want to refer to you. I have a letter from one of my colleagues in the House of Representatives here which I received this morning. He encloses a letter from a rather outstanding local medical society. There are at least two counties named in this letter. It is probably a joint county society including the capital of one of our States, and he says:

> The members of this society would like to call—

this is the secretary-treasurer of the two medical societies joined—

> The members of this society would like to call to your attention the practice of a Federal subsidy in an office of medicine that certainly has not been asked for, is not needed, and can be just as capably handled through private endeavor. It has to do particularly with the grant-in-aid for child and maternal welfare from the Social Security Administration to the State health department. This money has been used to pay the expenses of outstanding doctors to travel over the State lecturing in their particular fields to the county medical society. There is no complaint whatever about the nature of the lectures or the qualifications of the speakers. The complaint has to do with the use of tax-raised funds being used for this purpose when private endeavor has carried on this program in the past, and certainly needs no tax support now or in the future. This evil cannot be curtailed by our simply refusing to accept the benefits of this money. The source of the trouble begins on the tax-raising level. * * *

Dr. SCHEELE. I think that would come under the purview of the Children's Bureau.

Mr. SCHWABE. I thought he had in his justifications some service in these items of assistance to States that covered these activities.

Dr. HALDEMAN. No, sir. I made no reference to maternal and child health programs.

Mr. SCHWABE. It is not included in this "Assistance to States" item?

Dr. HALDEMAN. No, sir.

Mr. SCHWABE. Then I withdraw the query.

Mr. FOGARTY. I wish you would follow it up with the Children's Bureau.

Mr. SCHWABE. I will be happy to. I just received that this morning and I think our colleague is entitled to an explanation.

ASSISTANCE TO STATES FOR POSTGRADUATE EDUCATION PROGRAMS

Dr. SCHEELE. In fairness, Mr. Schwabe, we should say that our assistance to States for cancer control, mental health, heart-disease control, and so forth, it is permissible for the States in some instances to use funds which your committee recommends for the Public Health Service for postgraduate education programs for physicians.

Mr. SCHWABE. That is in the nature of fellowships?

Dr. SCHEELE. No, sir. I can cite an example in Oklahoma sometime ago. This was in 1947 or 1948. The State hired as a consultant a Dr.

Samuel Binkley who now practices in Oklahoma City. I met him at the time I was working in Memorial Hospital, New York City. Dr. Binkley went into the State to lecture and the State paid him from grant-in-aid funds of Public Health Service-tax funds. This post-graduate training program was worked out with the county medical societies and the State medical society. He gave lectures to the doctors and they turned out almost 100 percent throughout the State to hear him. He was there on a very heavy schedule of one day or half day county by county stands, telling about the newer methods of diagnosis and treatment of cancer. The general practitioner needs to recognize cancer early. That has been one of our weaknesses.

I recognize that some of the medical societies consider that is interference with their obligations and if they want to do it with their own funds they should carry on this education. On the other hand they have not always done it. We hope, in the Public Health Service, that none of the funds that are provided to States in our grant program are used for education without clearance and full support of everyone involved.

There may be a State here or there where State officials did not get adequate clearances. We hope there are not any. Their programs will not be of much value if there is opposition. We think there is a field for proper use of Federal funds in such a program. Certainly it should not be a large part of the expenditures in any given State——

Mr. SCHWABE. Rather to be used as a stimulus; isn't that your view?

Dr. SCHEELE. Yes, sir.

FORMULA USED TO ALLOCATE GRANTS TO STATES

Mr. SCHWABE. One other item and I am through. It is in reference to the table which, I think, the chairman has already placed in the record showing allocations of grants-in-aid for general health—fiscal years 1951 and 1952 and estimates for 1953. The total amounts for 1952 actually appropriated and the estimate which you have attempted to justify for 1953 fiscal are identical in total.

Dr. HALDEMAN. That is correct, sir.

Mr. SCHWABE. And yet they varied more or less materially in some instances when they were allocated to the various States. Is that true? What is the reason for the fluctuation and how does it happen that you just hit upon the grand total being identical for the 2 years?

Dr. HALDEMAN. Our formula for the allocation of general health grants is based upon three factors: First, total population; second, extent of financial need; third, special health factors, which in the case of the general health fund, is usually population sparsity.

When the population data based on 1950 census became available that changed the allocation State by State some. In previous years we had used estimated populations. There is some small annual variation according to the per capita income (the relationship of economic status in the State). The allocation is made on a strictly formula basis and is objective without an element of judgment on the part of the Public Health Service entering into it.

Mr. SCHWABE. Well, I am just going to use this matter as an illustration. The State of Oklahoma for the 1951 fiscal year received an allocation of $270,500 and in 1952, $248,600. The table will doubtless be presented for the allocation for fiscal 1953 which the chairman has

requested you to make part of the record. It would not necessarily be the same as either of these figures?

Dr. HALDEMAN. No, sir; it is not.

Mr. SCHWABE. And your figures for these several years are always based on the formula prescribed by law pursuant to which these appropriations are made; is that correct?

Dr. HALDEMAN. That is correct.

Mr. SCHWABE. I had that in mind but I wanted that in the record for all Members of Congress.

Mr. FOGARTY. What did you request of the Bureau of the Budget?

Dr. HALDEMAN. $28,731,000.

Mr. STEPHENS. The Bureau estimate was $28,731,000 but the official estimates that went over after the ceilings and adjustments were made was $17,020,000.

DISEASE AND SANSTATION INVESTIGATION AND CONTROL, TERRITORY OF ALASKA

Mr. FOGARTY. Now, Dr. Haldeman, are you going to justify the appropriation request under the heading of "Disease and Sanitation in the Territory of Alaska"? Do you have a statement on Alaska?

GENERAL STATEMENT

Dr. HALDEMAN. Yes, sir; Mr. Chairman, beginning with the fiscal year 1949 the Public Health Service has been conducting a special program in Alaska. This program was the result of increased awareness of Congress and this committee in particular of the economic and military importance of Alaska. Also, there has been a growing realization that Alaska and other low-temperature districts of the Northern Hemisphere constitute one of the greatest potential areas for future settlement of our population.

INCREASE OF CIVILIAN AND MILITARY PERSONNEL CREATE HEALTH PROBLEM

The development in the last few years has been marked by an influx of civilian and military personnel that has accentuated the already acute health and sanitation problems. These areas have all the known diseases with the exception of a few peculiar to the Tropics. But there are marked variations and differences in the method of transmission and the epidemiological patterns. The factors are not well understood.

For example, in Sitka, Alaska, where the orthopedic hospital is located, we have more cases of bone tuberculosis than in any other place on the continent. An outbreak of poliomyelitis caused 14 deaths and 38 cases of paralysis in a village of 200 people.

Any attempt to analyze the health problems there is handicapped from the start by the lack of vital records. The records we have point to causes of death and indirectly to ways of life which are quite different from those of temperate areas. The two leading causes of death are tuberculosis and violent and accidental deaths, as compared to the States where cardiovascular disease and cancer are the chief causes of death.

It is somewhat paradoxical that in the North where there are the fewest number of people per square mile of anywhere in the world, we have suffered from the same health problems usually associated with overcrowded living conditions. Families of five or six live in one- or two-room shacks. They are not only in the lower economic group but wives and families of military and civilian defense workers.

HIGH ATTACK RATE OF COMMUNICABLE DISEASES IN ALASKA

It is not surprising that the attack rate of diseases transferred from person to person is higher in Alaska than in other districts. Measles, whooping cough, influenza death rates are many times those of temperate areas. In 1950 there were polio, meningitis, whooping cough, and typhoid.

Outbreaks of gastroenteric diseases are frequent, particularly in the spring when the melting ice and snow exposes the winter's accumulation of excreta, which contaminates the water supplies. We do not know what the effect of cold is on the epidemiological aspects of these diseases. In some instances we have isolated from the water supply organisms of the group causing gastroenteric diseases, which give chemical reactions contrary to those ordinarily expected.

Also, as may be expected, due to the number of fauna in low-temperature areas, the group of animal-borne diseases is higher than in temperate climates. In the Arctic we have fish tapeworm infections, hydadid disease, trichinosis, leptospirosis, and rabies.

Man is an essentially tropical animal. He originated in the subtropics and moved northward as he was able to overcome adverse environmental conditions and develop suitable methods to overcome special health problems in those areas. Within certain limits I think there are justifications for assuming that the farther north we go, the higher the degree of civilization develops. Personally, I like Alaska very much and I look forward to the time when it will be a center of a great community.

The funds made available under this appropriation enable the Public Health Service to meet these problems in three ways:

SPECIAL GRANTS TO ALASKA FOR GENERAL HEALTH PURPOSES

First, through the activity entitled "Special grant to Alaska for general health purposes." These funds make it possible to augment the existing health services of the Territory. The Territorial Legislature has also recognized the serious nature of their health problems and in the course of this program have substantially increased their own appropriation.

From 1947 through 1949 during the period this program was initiated, $556,000 was made available through their own territorial appropriations. The appropriation for the biennium beginning in 1951 was $1,065,400 for health purposes appropriated by the Territory. This constitutes a per capita expenditure for health on their own part well above the average for the States.

TECHNICAL ASSISTANCE TO ALASKA

Under the item of "Technical assistance to Alaska" professional workers are assigned to the Alaska department of health to assist them in their health program.

Among the key positions occupied by these personnel are the Assistant Commissioner of Health, the Director of the Bureau of Epidemiology and Tuberculosis and the Director of the Bureau of Vital Statistics.

FIELD AND LABORATORY INVESTIGATIONS

Funds made available under the activity entitled "Field and laboratory investigations" enable the Public Health Service to carry on a program of basic and applied research at Anchorage. The basic research includes studies in physiology, biochemistry, entomology. Developmental research includes studies in environmental sanitation, insect control, bacteriology, and—in addition—studies in animal-borne diseases.

STUDIES IN SANITATION

Perhaps some of the more important studies may be of interest to you. In the field of environmental sanitation are studies in the operation of septic tanks with the accompanying disposal fields. These studies indicate that these units are practical for operation in areas with very cold temperatures. Our experimental units are on the grounds of the University of Alaska and now have operated successfully for 2 years. I think this is an important step in eliminating a serious health hazard from the Territory and certainly an aid in bringing safe water into the homes in the Territory. I might emphasize that we are not the pioneers we used to be. Now the folks going to Alaska want running water in their homes.

We have made some extensive observations on the existing water supply and waste disposal systems both in Alaska and in Canada. Our observations to date would lead us to believe that some but not all of the problems can be solved by modifications of conventional design which would be both workable and economically feasible for civilian communities. Our observation is that adherence to good engineering design would eliminate trouble. Get the lines down 10 or 15 feet so as to be below the frost line, then with insulation above the line, with adequate coverage and adequate grade, and the maintenance of continuous flow—these are some of the factors to be cared for. We lack a lot in obtaining the answers but I think some of the answers we can give.

INSECT CONTROL PROGRAM

Our insect control program has been based on the development of methods of killing insects in the air with relatively small amounts of airborne inorganic insecticides. This line of attack has been chosen because the usual methods of insect control such as drainage, larviciding and residual sprayings of homes are not practical in low temperature areas.

The technique developed at the Arctic Health Research Center for use in small settlements is now generally in use throughout the Territory. It has been extremely helpful in such places as the oil developments in the Naval Petroleum Reserve on construction camps for bridges and roads; it permits them to work in that period of the year when there are long hours of light and the greatest amount of work can be done; and it enables them to increase the effectiveness of their work.

We are finding this unit useful on jeeps and trucks and this is in use in some of the larger communities. Our emphasis just now is on developing suitable units in the bush planes so common through the Territory.

STUDIES IN ANIMAL-BORNE DISEASES

In the field of animal-borne diseases you might be interested in some of the recent developments. Studies of echinococcosis infections have been of special interest. This is a parasitic disease in which the adult worm is usually found in dogs or other carnivorae. There is an intermediate host, which is usually moose or caribou. It is very unusual in the States. We have shown that there is a large reservoir of infection in our Alaskan dogs. We are taking steps to prevent the importation of these dogs into the country through the amendment of our foreign quarantine regulations. No dogs will be allowed to enter unless we are sure the dog is free of infection.

Mr. DENTON. What kind of infection?

Dr. HALDEMAN. It is a very small tapeworm.

Mr. DENTON. And they get that from eating moose or caribou?

Dr. HALDEMAN. Yes. The intermediate stage is not dangerous to people but only to dogs. Humans get it from excreta of dogs. In nature, it is kept alive through wolf-eating caribou. The recent development of this study was what I was leading up to.

We found at St. Lawrence Island, an island within 20 miles of the Siberian coast, an Asiatic strain of the parasite which infects foxes and dogs on the island. But the significant thing was the intermediate host—instead of being a moose or caribou—was a rodent. This Asiatic strain is not present among the rodent population of Alaska. However, it could be carried down into the States and there could be a source of infection for our dogs. The fact that rodents and field mice are involved could be a serious situation. Since presently our dogs in the United States do not have access to the infection. We immediately took steps to prohibit the importation of dogs from St. Lawrence Island and they are doing well in prohibiting them at present.

There is an ever-increasing volume of data on trichinosis. We plan to publish the result of 3 years' work in the latter part of this calendar year. The unusual feature in low temperature areas is the reservoir of the infection which has been discovered in Arctic sea mammals, in the walrus and seal.

Phlyctenulosis is a major cause of blindness in the nonwhite population, about a quarter of whom have some degree of blindness as a result of this infection. We found the topical application of cortisone successful and as a result an active program has been established by private physicians and the Alaska Department of Health. I mention this as an example of the early application of the results of a scientific discovery.

STUDY OF FOOD IMPORTATION FROM STANDPOINT OF CIVILIAN DEFENSE

Another study which is nearing completion is the importation of food to certain areas of western Alaska. This study is of importance from the viewpoint of civilian defense. At the present time Alaska is largely dependent on food imported from the States and basic data is needed for further planning in case the sea lanes to Alaska are cut.

Information is also being used to obtain better basic information regarding the nutritional status of the Territorial inhabitants.

STUDY OF PHYSIOLOGICAL AND BIOCHEMICAL PHENOMENA

We are also studying some of the physiological and biochemical phenomena associated with cold. Arctic mammals are used for most of these studies since man does not possess the full adaptation to cold found in the native animals. One of our more interesting findings relating to adaptation to cold has been in relation to the melting point of fat in various parts of the body. It has been found that the melting point of fats in the more exposed parts of the body, such as the lower part of the leg, is lower than that in other parts of the body better insulated by hair or flesh. For instance, in the bone marrow of the caribou, the melting point of the fat was lower in the leg than elsewhere in the body.

Another finding in this field is the fact that the skin temperature of animals in their natural habitat has been taken through the use of special thermocouple equipment. The evidence would indicate that these tissues live in an apparent healthy condition for long periods of time at temperatures as low as 2° to 3° C.

I think that will complete my statement, Mr. Chairman.

BUDGET REQUEST

Mr. FOGARTY. For 1952 you had appropriated $1,211,000 and you are asking for $1,230,000.

Dr. HALDEMAN. That is correct.

Mr. FOGARTY. The positions remain the same, 75. You are asking for a supplemental of $19,000 in 1952, because of the pay increases.

Dr. HALDEMAN. That is right.

Mr. FOGARTY. How much of that pay act increase are you going to absorb in 1952?

Mr. THOMPSON. This is the total amount.

Mr. FOGARTY. You are not absorbing any?

Mr. THOMPSON. No.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Mr. THOMPSON. $1,338,000.

COOPERATION WITH MILITARY PROGRAM

Mr. FOGARTY. What is the military doing that bears on this problem?

Dr. HALDEMAN. The military is carrying on a program in several areas. In the field of research they have a field station at Ladd Field, near Anchorage, which is conducting some very good research particularly in the field of Arctic clothing and Arctic diet. We worked very closely because we tried to complement their effort. They used our laboratory and library and our technical skills and competence and in turn we called on them. They are doing some excellent work in permafrost research. This augments work in the health field because work in the housing and construction field is very acute.

The Army is conducting a fairly complete program which includes some public health. All their major bases are employing public health nurses to serve the families on the base. Houses for military personnel in Alaska are short and only a small percentage of families live on the base. These programs are coordinated with the Alaska Department of Health and the nurses work under the supervision of the health department in that area.

LACK OF ALASKA TAXING AUTHORITY TO EXPAND HEALTH PROGRAM

Mr. FOGARTY. Are you satisfied that Alaska is expending as much as possible in its efforts to overcome these problems?

Dr. HALDEMAN. I think so, Mr. Fogarty.

Mr. FOGARTY. The question has been raised in the last 2 or 3 years.

Mr. HALDEMAN. Unfortunately, Alaska does not have a source of local appropriations that can augment their health program as is true of most States. The organic act of Alaska with the exception of incorporated cities, has no taxing authority and in these areas, for instance Anchorage, where I lived—the city limits are very restricted. There is some reluctance on the part of the city to appropriate what it could because the city is only 11,000 but the health jurisdiction is 35,000, and the area outside the city limits has no method of raising local taxes to support it.

I think the program has been very generously supported by the territorial legislature.

ASSISTANCE TO STATES GRANTS FOR ALASKA

Mr. SCHWABE. Do you have anything under the Assistance to States for Alaska?

Dr. HALDEMAN. Yes, sir. In our regular formula grants. Under the general health appropriation, 1953, they were allotted $40,300.

Mr. FOGARTY. Why should not that be all in one appropriation?

Dr. HALDEMAN. Our present Public Health Service Act defines Alaska as a State, and so without an amendment of the act it would not be possible to draw out their part of the regular grants-in-aid.

Mr. STEPHENS. That is also true of Puerto Rico, Hawaii, and the Virgin Islands.

PROBLEM OF CLINICAL FACILITIES TO AUGMENT PROGRAM

Mr. FOGARTY. Do you have a pathology laboratory?

Dr. HALDEMAN. One of our greatest needs is for a clinical laboratory and pathology laboratory. We have been greatly handicapped by lack of clinical facilities to augment the program of the center. That I hope will be solved with the completion of a 400-bed native hospital in Anchorage. This is scheduled for completion in 1953. The Office of Indian Affairs has offered to assist us through the provision of space in the hospital if we are able to get something started in that direction.

One of the difficulties is that autopsies are seldom performed and the more or less routine basic information that you obtain through an autopsy gives you considerable help.

Mr. FOGARTY. You do not have the funds?

Dr. HALDEMAN. No.

Mr. FOGARTY. Have you ever requested funds?

Dr. HALDEMAN. Yes, sir. Our request to the Bureau of the Budget did include a request for establishment of a pathology program.

Mr. FOGARTY. At what cost?

Dr. HALDEMAN. It was approximately $60,000.

Mr. FOGARTY. And it was reduced by the Bureau of the Budget?

Dr. HALDEMAN. That is correct, sir.

HIGH INCIDENCE OF DEATH FROM TUBERCULOSIS

Mr. DENTON. Do you have a high rate of deaths from tuberculosis in Alaska?

Dr. HALDEMAN. Yes, sir. The ratio of deaths from tuberculosis to deaths from all causes is higher in Alaska than in any of the States or Territories. The death rate as reported in 1949, which is the last year for which there are complete figures, was 181 per 100,000.

Mr. DENTON. And Puerto Rico, I believe, is higher than Alaska?

Dr. HALDEMAN. The death rate for Puerto Rico as reported in 1949 was 145 per 100,000 as compared to 181 in Alaska.

Mr. DENTON. What is the country as a whole?

Dr. HALDEMAN. It has a total for the year of 26.3.

Mr. DENTON. Is a good deal of that tuberculosis among the natives?

Dr. HALDEMAN. The tuberculosis death rate among the Eskimos and Indians is very high; yes.

TUBERCULOSIS CONTROL PROGRAM

Mr. DENTON. Are they doing anything to try to strengthen the control program?

Dr. HALDEMAN. Yes. There has been a real emphasis on their tuberculosis control program. It is being attacked from several directions. The high incidence areas of the Territory have been completely covered with a BCG program.

Mr. DENTON. What is BCG?

Dr. HALDEMAN. The vaccine to which Dr. Anderson referred yesterday. The number of hospital beds has been considerably increased. There are currently some 584 beds and something in excess of 300 beds under construction.

Mr. DENTON. Do you have difficulty in being able to treat the individuals? Are they uncooperative?

Dr. HALDEMAN. The Eskimos and Indians are extremely cooperative.

Mr. DENTON. It is difficult to get to them though, isn't it?

Dr. HALDEMAN. From the standpoint of diagnosis?

Mr. DENTON. From the standpoint of transportation and the way they live?

Dr. HALDEMAN. There are a few groups of Eskimos that have not been screened—a very few. The screening process of the Alaska Department of Health has pretty thoroughly covered the Territory.

Practically every village has a small power plant in the school, so it has been possible to take in this portable X-ray machine.

Mr. DENTON. So you have X-rayed their chests?

Dr. HALDEMAN. Yes.

EYE DISEASE PROGRAM

Mr. DENTON. What have you done about the eye disease?

Dr. HALDEMAN. The program there is almost completely based on treatment of the acute attacks. The disease attacks children and it leaves scars on the cornea which interferes with vision. The topical application of cortisone which the physicians have placed in the eye will cure it. Teachers have been instructed to use it with the children and they are doing it in isolated areas.

Mr. DENTON. When they first get the disease what are the symptoms?

Dr. HALDEMAN. They get red eyes. The treatment is very dramatic. It stops that attack but it does not stop a recurrence. It does not cure the person for good but if you obtain cortisone each time, you can eliminate the trouble.

MOBILE CLINICAL UNITS

Mr. DENTON. Do you have doctors who travel among the Eskimo?

Dr. HALDEMAN. Yes. The Alaska Department of Health has five mobile units. The unit is a boat fixed up like a small clinic. It has a physician, a dentist, a nurse, a laboratory technician and clerk, and occasionally a sanitarian. The boat visits every village and they are on a schedule to try to get to each village every year or every 18 months, at which time they see all the population.

In the meantime between visits there is public health nursing service in many areas. Unfortunately, many areas are not covered by nursing service.

Mr. DENTON. How do you get to the Eskimo inland?

Dr. HALDEMAN. They are pretty well concentrated on the coast. There are groups of Indians relatively isolated, but most of them are coming to the roads or you have to go in by plane.

Mr. DENTON. I think that is all.

COOPERATION WITH BUREAU OF INDIAN AFFAIRS

Mr. SCHWABE. The Bureau of Indian Affairs has spent a great deal of money in connection with the health of the Indians in Alaska, have they not?

Dr. HALDEMAN. That is correct.

Mr. SCHWABE. And still are?

Dr. HALDEMAN. That is correct.

Mr. SCHWABE. And through their health service to the Indians during the years there has been cooperation generally with the United States Public Health Service?

Dr. HALDEMAN. Very closely. The director of their medical service in Alaska is an assigned Public Health Service officer.

Mr. SCHWABE. And has been during the past few years.

Dr. HALDEMAN. That is correct.

Mr. SCHWABE. The total effort and personnel placed there is a much more intensive program than that which you have outlined here which you indicate is being offered to the people of Alaska by our Federal Government. Is that not correct?

Dr. HALDEMAN. Yes.

Mr. SCHWABE. The Indian Service contribution, through the appropriations of the Interior Department are even larger for the welfare and health of the Indians of Alaska than the Public Health Service are?

Dr. HALDEMAN. Yes, sir.

Mr. SCHWABE. And that also extends over in some instances to the Eskimos as well as the Indians. Does it not in the Interior Department?

Dr. HALDEMAN. The eligibility for their service is equal whether Eskimo, Indian, or other native.

Mr. SCHWABE. So what you are trying to testify to here is a separate appropriation for the activities of the Public Health Service in Alaska which is a comparatively small part of the entire funds being appropriated by the Federal Government for the health of the people in Alaska?

Dr. HALDEMAN. Yes.

Mr. SCHWABE. Can you tell us the total population of Alaska?

ALASKA POPULATION

Dr. HALDEMAN. The total population of Alaska in the final release from the Bureau of the Census was 134,000. That is plus or minus a few hundred.

Mr. SCHWABE. And of that 134,000, can you tell us, roughly, how many are identified or classified as Eskimos and Indians and how many white people?

Dr. HALDEMAN. Approximately 35,000 are Eskimos, Indians, and Aleuts from the Aleutian Islands. The Aleuts are less numerous, only a very few thousand remain.

Mr. SCHWABE. And some 99,000 are left.

Dr. HALDEMAN. That is correct, sir.

Mr. SCHWABE. Do you happen to know the approximate percentage of the whole lands of Alaska that are privately owned?

Dr. HALDEMAN. Mr. Schwabe, I could not give you an accurate——

Mr. SCHWABE. It is less than 1 percent.

Dr. HALDEMAN. It is a very small amount and is rather a controversial subject. I could not tell you the exact amount.

Mr. SCHWABE. I think that is all.

CONTROL OF COMMUNICABLE DISEASES

WITNESSES

DR. JUSTIN M. ANDREWS, OFFICER IN CHARGE OF COMMUNICABLE DISEASE CENTER
LEONARD B. ABBEY, BUDGET AND FISCAL OFFICER, COMMUNICABLE DISEASE CENTER
DR. LEONARD A. SCHEELE, SURGEON GENERAL
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$6,165,000	$5,915,747	$5,972,000
Transferred to "Salaries and expenses, defense production activities, Federal Security Agency," pursuant to Public Law 253		−25,000	
Adjusted appropriation or estimate	6,165,000	5,890,747	5,972,000
Proposed supplemental due to pay increases		287,000	
Reimbursements from other accounts	158,435	518,323	226,507
Total available for obligation	6,323,435	6,696,070	6,198,507
Unobligated balance, estimated savings	−34,423		
Obligations incurred	6,289,012	6,696,070	6,198,507
Comparative transfer from "Salaries, expenses, and grants, National Heart Institute, Public Health Service"	54,527		
Total obligations	6,343,539	6,696,070	6,198,507

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct Obligations			
1. General disease-prevention and control	$3,877,519	$4,272,050	$4,212,000
2. Specific disease-prevention and control	1,771,311	1,383,097	1,237,400
3. General epidemic and disaster aid	16,424	40,000	40,000
4. Administration	519,850	482,600	482,600
Total direct obligations	6,185,104	6,177,747	5,972,000
Obligations Payable Out of Reimbursements From Other Accounts			
1. General disease-prevention and control	158,435	319,223	226,507
3. General epidemic and disaster aid		199,100	
Total obligations payable out of reimbursements from other accounts	158,435	518,323	226,507
Total obligations	6,343,539	6,696,070	6,198,507

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Summary of Personal Services			
Total number of permanent positions	1,480	1,411	1,318
Full-time equivalent of all other positions	8	9	9
Average number of all employees	1,247	1,194	1,137
Average salaries and grades:			
General schedule grades:			
Average salary	$3,520	$3,931	$3,908
Average grade	GS-5.1	GS-5.2	GS-5.1
Crafts, protective, and custodial grades:			
Average salary	$2,581	$2,947	$3,053
Average grade	CPC-3.9	CPC-4.0	CPC-4.0
Ungraded positions: Average salary	$2,044	$3,027	$3,027
Personal service obligations:			
Permanent positions	$4,696,158	$4,923,741	$4,708,145
Part-time and temporary positions	25,139	28,500	28,440
Regular pay in excess of 52-week base		13,645	12,855
Payment above basic rates	22,692	9,317	9,577
Total personal service obligations	4,743,989	4,975,203	4,759,017
Direct Obligations			
01 Personal services	4,643,536	4,781,080	4,629,890
02 Travel	228,906	234,200	229,000
03 Transportation of things	79,181	69,400	68,500
04 Communication services	49,697	49,500	49,100
05 Rents and utility services	152,212	79,650	79,200
06 Printing and reproduction	15,893	16,400	16,400
07 Other contractual services	82,024	78,100	73,200
Services performed by other agencies	6,056	5,000	5,000
08 Supplies and materials	588,253	508,607	471,200
09 Equipment	335,601	306,600	301,600
13 Refunds, awards, and indemnities		1,000	1,000
15 Taxes and assessments	5,185	9,650	9,350
Unclassified (general epidemic and disaster aid)		40,000	40,000
Subtotal	6,186,544	6,179,187	5,973,440
Deduct charges for quarters and subsistence	1,440	1,440	1,440
Total direct obligations	6,185,104	6,177,747	5,972,000
Obligations Payable Out of Reimbursements From Other Accounts			
01 Personal services	100,453	194,123	129,127
02 Travel	5,782	39,700	8,800
03 Transportation of things	809	9,100	900
04 Communication services	261	5,300	100
05 Rents and utility services	94		
07 Other contractual services	13,940	38,900	5,700
08 Supplies and materials	25,734	200,700	81,180
09 Equipment	11,269	30,500	700
15 Taxes and assessments	93		
Total obligations payable out of reimbursements from other accounts	158,435	518,323	226,507
Total obligations	6,343,539	6,696,070	6,198,507

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$1,274,672	$994,024	$737,247
Obligations incurred during the year	6,289,012	6,696,070	6,198,507
	7,563,684	7,690,094	6,935,754
Deduct:			
Reimbursable obligations	158,435	518,323	226,507
Unliquidated obligations, end of year	994,024	737,247	687,000
Adjustment in obligations of prior years	52,139		
Obligated balance carried to certified claims account	16,578		
Total expenditures	6,342,508	6,434,524	6,022,247
Expenditures are distributed as follows:			
Out of current authorizations	5,458,592	5,165,000	5,285,000
Out of prior authorizations	883,916	994,024	725,747
Out of anticipated 1952 supplemental for pay increases		275,500	11,500

Mr. FOGARTY. We will take up first this afternoon the control of communicable diseases. Did you have a statement for the committee, Dr. Andrews?

GENERAL STATEMENT

Dr. ANDREWS. I would like to speak from my notes and briefly review the accomplishments in this field for the last year.

This budget item—control of communicable diseases—supports the activities of the Communicable Disease Center, a Public Health Service facility headquartered in Atlanta, Ga., the activities of which were carried on in 40 States, the District of Columbia, Hawaii, and Puerto Rico this year.

SERVICES PROVIDED

The Communicable Disease Center exists to help the States control communicable diseases and certain other preventable conditions which are not provided for elsewhere. It also has the responsibility of providing epidemic and disaster aid when requested by State health officers. These ends are accomplished by developing better techniques, materials, and equipment for the diagnosis and control of disease, making the necessary laboratory and field tests of these procedures, demonstrating them to State and local health personnel, and, finally, by training these individuals in their application.

FUNDS AVAILABLE 1952

The fiscal 1952 appropriation for control of communicable diseases was $5,915,747. This excludes $287,000, proposed for the recent civil-service pay increase, and $25,000, which is being transferred to another appropriation. That leaves us with a net total of $6,177,747 appropriated or proposed for availability in fiscal 1952.

ESTIMATE FOR 1953

Our estimate for 1953 is $5,972,000. This is $205,747 less than the net total for fiscal 1952. The savings are effected by decreased requests for general disease prevention and control to the amount of $60,050 and for specific malaria and typhus control in the amount of

$145,697. All other items on the 1953 estimate are held at the 1952 levels.

I think I should point out, however, that services like laboratory diagnosis and audio-visual production, which use large quantities of expendable supplies, reduce the total amount available because of the increased costs of equipment, materials, animals, feed, et cetera. Thus our operations will have to be curtailed accordingly.

DISCONTINUANCE OF MALARIA-CONTROL ACTIVITIES

The malaria-control activities, which have been supported for 16 years by State, local and Federal Governments, are being stopped this year. If you will refer to the chart which Mr. Abbey is holding up, copies of which are being passed around with tabular data attached, you will see a notable decline in the reported prevalence of this disease from something like 133,000 cases in 1936 to less than 2,300 in 1950. Actually, we have good reason for believing that very few of the 2,300 cases reported in 1950 were actually parasite-positive cases of malaria newly acquired in this country.

We believe that the State and the local and the Federal Governments which have sponsored these programs should be credited with much of this reduction. Unfortunately, the possibility of reestablishing malaria in this country has increased during the last year with the repatriation of several thousand members of the Armed Forces who were infected overseas, mostly in Korea. Many of these individuals have returned to this country on the rotational point system; some of them have been separated from the service and are no longer under military control.

The Armed Forces have made all reasonable efforts at nullifying their infectivity but relapses among these returnees have now been reported from all but two States during 1951.

We believe that the spread of malaria from such sources can be prevented by laboratory confirmation of all clinically suspect cases, by energetic treatment of these cases with modern antimalarials and, by no means least, prompt reporting of these cases to health authorities so that preventive DDT spraying can be done where it is indicated.

Arrangements have already been made in the States where malaria transmission is most likely to occur for the application of DDT in the homes of proven cases and all premises within a mile of proven cases if it is found that infectible species of mosquitoes may be present. That program, to which I made reference last year as the malaria surveillance and prevention program, is a relatively cheap one to maintain, and in our opinion it should be supported federally as long as the importation of malaria by Armed Forces, by immigrants, or by any other source constitutes a burden and a threat to the States, unless, of course, some other cheaper and more effective solution to this problem is found.

Actually, this program could be financed for 1,250 years for what malaria was reckoned in 1938 to cost this Nation each year.

REDUCTION IN TYPHUS

Typhus fever is a disease of rats which has been a plague to man in the Southeastern States for a good many years. If you will look at the chart that Mr. Abbey is holding, copies of which are being circulated—the numerical data are attached—you will see that there has been a notable reduction in the reported prevalence of murine typhus fever, a reduction which is coincident with the Federal program started the year after the peak incidence in 1944 when 5,338 cases were reported. This last year from the entire United States it was 683. We know that the former figure represents underreporting; at that time about 40 percent of the cases were actually reported. We don't know what the actual proportion of correct reporting is, but it is certainly much higher than 40 percent.

Mr. DENTON. Does the average doctor know typhus?

Dr. ANDREWS. In the Southeast I think that he does. There has been a program through the medical societies, calling it to their attention. They recognize the rash.

Actually now, with the use of antibiotics, which have some effect in murine typhus fever, the cases don't actually get through normal clinical excursion. They are sometimes aborted early and sometimes you can't even get serologic evidence because they have stopped the course of the disease too soon for antibodies to be formed.

But, to answer your question specifically, I think a good many physicians in the South recognize the disease easily. It used to be confused with malaria, but that stopped some years ago.

Mr. SCHWABE. The morbidity is not as high as it used to be with typhoid.

Dr. ANDREWS. No. It is nothing to compare with it. We believe that this disease could be eradicated for a relatively small sum of money, and we are exploring the feasibility of that. If we do find that it is practicable we will doubtless make some sort of proposal about that in the future.

Mr. DENTON. Is it carried by rats?

Dr. ANDREWS. Yes, sir. Carried by fleas on the rats.

Mr. SCHWABE. Different rodents? Not on rats alone?

Dr. ANDREWS. Not by rats alone, but I would say 99 percent or something of that general magnitude is rat-borne. It is carried by the same flea, incidentally, that carries plague: The Oriental rat flea.

Rats also carry a number of other diseases, including leptospirosis, which produces a form of jaundice, salmonellosis infection, which is commonly identified as food poisoning, trichinosis, and certain other infections that are reservoired or spread by domestic rodents.

PEST-CONTROL PROGRAM

The collective incidence of these sicknesses is considerable. The Communicable Disease Center investigates rat prevalence and promotes and demonstrates rat control in communities to prevent these diseases. From July 1, 1950, to the 1st of December 1951 we completed 675 surveys and demonstrations in 647 cities and 28 States and the District of Columbia. Similar activities are under way now in 22 cities. We will be glad to supply you with the names of these States and cities if you want them.

Mr. FOGARTY. Just what do you do when you go into a city?

Dr. ANDREWS. These rat experts of ours go around and they find the places where rat harborages are most likely to be located. They explore the market first of all because that is a common gathering place of rats; also the warehouses where foods are stored. And they are able to make pretty accurate appraisals of the numbers of rats on the premises and what it will cost to ratproof those buildings so that the rats can't get in and out, and the most feasible way of rat killing in the particular situation.

Mr. SCHWABE. Believe it or not, in restaurants of the less desirable type.

Dr. ANDREWS. Plenty of them.

Mr. FOGARTY. Someone developed a new poison for killing rats a couple of years ago; isn't that right?

Dr. ANDREWS. That is right.

Mr. FOGARTY. I remember it was explained a couple of years ago.

Dr. ANDREWS. Yes. Warfarin. It is an interesting chemical. It destroys the blood vessels of the rats and keeps their blood from clotting so that they bleed to death within their own bodies. It is a very interesting sort of poison. It is one which could be as poisonous to man and small animals as it is to rats, except for the fact that you have to take repeated doses of it—five or six—and it is contained in a very unappetizing mixture of corn oil and meal.

Rats seem to take that quite avidly, but puppies or cats aren't interested in it, nor are children, so that actually I do not know that there are any cases of poisoning with warfarin on record. I am unaware of it if there are.

The poison which we had before was "1080" or sodium fluoroacetate. It is a very effective rat killer, but it kills almost anything else that it gets in contact with, too. Frequently you see a circle of rats 6 or 8 feet away from a container which has "1080" water in it.

FOLLOW-UP AFTER SURVEY

Mr. FOGARTY. Do they actually carry out the recommendations of the survey with rats?

Dr. ANDREWS. Yes, they do indeed. All they have to do to be shown. You can well imagine inasmuch as something like 675 surveys and demonstrations were carried out in a year and a half. We cannot muct more than start the people in the jobs. That is all we attempt to do. And they carry on from that point.

In some instances the professional pest-control agencies do the work, and we are training them wherever we can so that they can do a better job.

In 1948, in cooperation with the National Institutes of Health, the Communicable Disease Center demonstrated conclusively the role of the fly in the transmission of diarrhea under certain conditions. This disease, diarrhea, not all of which is caused by flies, kills from 8,000 to 10,000 persons each year, mostly children under 2 years of age. Actually, in 1947, 1948, and 1949 there were progressive increases, which I do not quite understand, in the numbers of deaths certified to this disease. It probably causes from 50 to 100 times as many cases, and the average duretion of these severe cases is 5 days, so that it is quite a significant cause of nonproductiveness among workers.

We have made modest demonstrations of community fly control in those localities in States where this problem is most acute, and this has led to 26 locally financed antifly projects in five different States. Community leaders take hold of that and go right ahead with fly control by themselves, too, just as they do with rat control.

Mr. DENTON. Do the flies not develop resistance to DDT?

Dr. ANDREWS. Yes. We cannot depend on DDT entirely for fly sanitation now. Until this problem of finding an answer to the flies' resistance to DDT is solved, we are much more interested in promoting permanent sanitary means—such as land fills, garbage removal, and getting rid of fly breeding rather than letting flies breed and then trying to kill them.

However, progress is being made in the problem of acquired resistance, something I want to speak about a little later.

POLIOMYELITIS RESEARCH

Our researches on poliomyelitis continue in Charleston, W. Va., and in Phoenix, Ariz. We are searching for the place where the virus exists in between epidemics. We are sampling sewage at monthly intervals. We are sampling the fly population because it is known that the virus can be found in flies during the epidemics, and we are trying to find whether or not it is resident in man during the interepidemic periods. And we are finding out some rather interesting things.

I am sorry Dr. Hedrick isn't here, because I know that he would be interested in this work that is done in Charleston. There we found that one of the three types of poliomyelitis virus—the Lansing strain, named after Lansing, Mich.—has inflected children from 1 to 2 years of age up to 50 percent in the poorest sections of the city, whereas in the wealthier sections of the city it is only 15 percent. The number goes up very quickly in the poorer sections to 80 or 85 percent, and in the wealthier sections to something between 40 and 50.

As a matter of fact, we believe that in the poorer sections actually everyone becomes immunized to this particular type of poliomyelitis. We do not know the significance of this, but it is an observation that seems to be of some importance, and sooner or later is going to relate itself to an understanding of the pattern of poliomyelitis that exists.

Mr. DENTON. You mean half the people in the poorer section of town have got poliomyelitis?

Dr. ANDREWS. The contradictory angle of this is that there is no perceptible difference in the paralysis rate among the rich and the poor. By and large, in most communities the paralysis attack rate is about the same for all groups, yet the process of infection which is immunizing and protecting many individuals against this particular strain of virus is going on among the poorer folks with greater coverage than it is among the richer ones. Now, as I say, I cannot explain the significance of that.

Mr. DENTON. You mean the poor people are half immunized from poliomyelitis?

Dr. ANDREWS. They have antibodies against that particular type. There are three large groups of poliomyelitis virus. One of the more important advances during the last year in the field of polio research is the demonstration that poliomyelitis virus exists in different strains,

which vary, for example, in the amount of paralysis that they cause. The three different types are Lansing, Brunhilde, and Leon. Brunhilde and Leon cause much more paralysis than Lansing does. Lansing can be grown in rats and mice. The other two must be grown in monkeys. It costs about $200 to diagnose a case of Brunhilde or Leon poliomyelitis because it has to be done in monkeys. It costs us less than $2 to diagnose a Lansing case because we can use a few rats or mice for that purpose.

I mention these findings in Charleston as indicative of the type of work that we are doing, which I think is producing basic information about the patterns of community prevalence of these diseases, many of which would not be reported at all to the doctor because they are minor, inconsequential illnesses; yet they may be confused with or they may constitute the atypical poliomyelitis infection which immunizes large parts of the population.

COOPERATION WITH NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

This work is carried on with the National Foundation for Infantile Paralysis. If a State health officer requests epidemic aid because of poliomyelitis, we now have arranged so that representatives both of the national foundation and from the Public Health Service go together. The community gets official and voluntary help at the same time, which prevents any duplication and works, we think, in the best interest and economy of all concerned.

Mr. DENTON. Did you say that was transmitted by flies?

Dr. ANDREWS. I hope I did not say it was transmitted by flies. We are uncertain about that. We know that the virus is in flies and in sewage during epidemics. Whether or not it is transmitted by flies is one of the objects of our research, and we certainly have not established flies as anything like a major factor in the transmission of poliomyelitis.

Plans are now underway to assist the national foundation in field-testing gamma globulin as a polio preventive. I presume you have read in the papers something about the use of this material. I want to refer to it later, too, in another connection, but the studies carried on by the foundation in Provo, Utah, during this last summer involved quite an extensive test of this material, and we are planning to assist the foundation in the future with similar field tests.

VIRAL ENCEPHALITIS

Another disease similar in certain respects to poliomyelitis is viral encephalitis. It is a type of sleeping sickness which affects both man and horses. Sometimes the number of horses and mules that are lost through this disease is perfectly astronomical. It goes up to many, many thousands a year. We have been carrying on research in this disease in the West and its counterpart in the East and have found new reservoir hosts—birds, the natural reservoir of this disease in nature—and certain new vectors. We have found it in certain mites that live on birds. The latest type of mite—I think this is very interesting—which comes under suspicion are the intranasal mites. Pigeons have, within their beaks and nostrils, mites which may pass from the father or mother bird to the squab. As you will remember,

the pigeon is one of the few birds which produces "milk" and nourishes their young on this secretion from its crop. This is regurgitated into the crop of the young birds by the older birds as they insert their beaks into the beaks of the babies. Thus these mites get from one generation of bird to the next. We think they may be concerned in transmitting the infection from the older birds to the younger ones.

At any rate, we know that most of the transmission in nature takes place to man through a species of mosquito, a very common one, *Culex tarsalis;* and, until we know more about these other systems which are undoubtedly involved, we are concentrating on producing methods of preventing the spread of this disease by this mosquito.

I have some photographs here of a young lady who is about to determine the types of mosquitoes, and this picture represents the catch from three nights in one mosquito trap. I will not say that all of these mo quitoes are *Culex tarsalis* by any means, but a large share of them are, and it gives you some idea of the tremendous hordes of mosquitoes which infest the water-development areas where irrigation is carried on in a large way.

We are working out methods of preventing the spread of this disease, and these are being applied in cooperation with the States and with the Federal agencies that are concerned in water development, particularly in the West. Incidentally, these water-basin projects, in which we have a concern with the potential production of insects important from the standpoint of public health, are being made the subject of study and report this year.

SERVICE TO STATES

Our laboratory continues to provide a variety of services to the States: Consultation, training, reference diagnosis, methodology research. This last year, 1951, the laboratory trained 450 technicians and laboratorians. Its diagnostic burden has exceeded 100,000 specimens each year, which is a tremendous amount of material for anybody to deal with. And the greatest proportionate increase in the type of these specimens is in the most expensive ones to process; that is, diseases caused by viruses, such as poliomyelitis, encephalitis, et cetera. That has gone from 1,100 in 1949 to 2,000 in 1950, and last year it was over 10,000, so that the States are very anxious to have this type of assistance in making diagnoses which they are unable to do themselves.

AUDIOVISUAL TRAINING

Our audiovisual training materials production goes ahead. During the last 5 years we produced an annual average of 16 new motion pictures and 24 film strips each year. Last year we released 21 motion pictures, 22 film strips, and 22 sets of slides. Sixty-five percent of the use of these training materials is by State, local, and Federal health agencies; 35 percent, by others.

INSECTICIDES

You will recall—this brings us closer to your question, Mr. Denton, concerning insecticides—that for a number of years we have tried to serve the States' interest by making comparative tests of different insecticides and rodenticides to ascertain the cheapest and most ef-

fective for their use. But the use of chemical insecticides has become complicated by this factor of acquired resistance. By and large, insecticides may be divided into two main groups, and one of these large groups—every member of it so far—has fallen by the wayside because it produces acquired resistance to its effects, particularly among the flies. Thus our present efforts are focused more directly on trying to find out just how it is that these compounds kill insects and just how it is that these insects adapt themselves to these poisons so that they are actually able to metabolize them insead of being injured by them.

We feel that, until that is known, it is unlikely that we can go very far in improving the type of insecticides. However, I must say that progress is being made in this direction. We now have a series of synergistic materials which can be added, for example, to DDT and which for a while at least prevent the acquisition of resistance.

It is also necessary for us to concern ourselves with the health of the operators who apply these chemicals, the occupants of the homes in which they are used, and the persons who consume fruits and vegetables which have been sprayed with these materials.

Mr. SCHWABE. And possibly even milk?

Dr. ANDREWS. That is quite possible; yes, sir. More knowledge is necessary about the effect and the propensities of these economic poisons. As you will recall, I told you last year we were establishing a new laboratory for this purpose in Wenatchee, Wash., and work is going on at that laboratory and also at our subheadquarters in Savannah, Ga.

EPIDEMIC INTELLIGENCE PROGRAM

The epidemic intelligence program is for the development of a mobile corps of reserve medical officers who are competent in the investigation and management of epidemic diseases. This program is already under way. By the end of this year 25 or more of these young officers will have received intensive training in these subjects. They will be acquiring practical experience from participating in research problems in field epidemiology and in the investigation of natural epidemics.

We believe that the association of these well-schooled novices with older observers and analysts of the mass phenomena of disease in the States will extend and improve the peacetime epidemiologic services of the Nation. Even if these officers leave the Public Health Service after a minimum tour of duty they will remain as reservists available for assistance in time of war to help the State and local health authorities in distinguishing between natural and enemy-induced outbreaks of disease, and in reducing these outbreaks thereafter.

Our participation in the Public Health Service program of the airborne disease study goes on in cooperation with the National Institutes of Health and the Environmental Health Center. This is, in our opinion, of great peacetime significance.

As you are probably aware, contact infection, as a theory of how certain respiratory diseases get around, has largely supplanted the idea of airborne infection. Contact infection seems to be a more adequate explanation, or it was until very recently when observations concerning accidental laboratory infections—of which we have had some in our own laboratory, as has the National Institutes of Health—

pulmonary TB and mycoses, Q fever, et cetera, challenge this concept and it becomes more necessary to determine the relative importance of contact infections versus airborne infections as modes of agent dissemination in order to formulate intelligent proposals for the prevention of these specific diseases.

These airborne-disease studies should also provide the basis for defense against overt biological warfare. This will be done by developing mechanisms for continuous or intermittent air sampling of disease-producing agents in the atmosphere and by devising more rapid methods of identifying these germs and of determining their specific susceptibilities.

Our own particular segment of this joint project employs predominantly biological approaches to the solution of these problems, using such things as serology, cultivation, animal inoculation, sensitization, and enzymology, and the specific susceptibilities to antibiotics. It is hoped that by these procedures we may determine information concerning the identity of these airborne pathogens or clues as to their susceptibility to therapeutic agents in time to minimize the effects of biological attacks.

EPIDEMIC AND DISASTER AID

Our epidemic and disaster aid continues at the same level as last year. Fourteen major emergencies beyond the resources of State health officers were met during fiscal 1951, and many other minor ones. This year we have had 12 to date, including the Kansas City flood.

It will be of interest to you, I think, to know that infectious hepatitis—epidemic jaundice—has ranked next to poliomyelitis as a basis for epidemic aid during the last few months. Our response to these requests for assistance has provided the opportunity for testing gamma globulin, which I referred to previously in connection with poliomyelitis, to stop the spread of infectious hepatitis. We have had most promising results.

USE OF GAMMA GLOBULIN FOR IMMUNIZATION

This is an example of how a basic observation, made by one of our consultants, can be field-tested and made available to the States. I do not know how well acquainted you are with gamma globulin. It is a sort of gift of antibodies from one generation to the suceeding one. It is a part of the blood plasma which contains something like 60 percent of all of the antibodies in circulating blood. I have a sample of it here so that you can see how it is dispensed by the Red Cross [handing to the chairman].

The blood program of the Red Cross, of course, accumulates tremendous quantities of blood, some of which becomes outdated before use. Any blood which has been kept under refrigeration for more than 21 days is considered outdated blood and not fit for transfusion. That blood is used to make a variety of products, including gamma globulin, which has been wonderfully successful in preventing infectious hepatitis.

We are now giving epidemic aid with this product. We had an epidemic of infectious jaundice in Tuba City, Ariz., about 90 miles north of Flagstaff. This city consists mainly of an Indian school and one of the Bureau of Indian Affairs' hospitals. About 400 children

were sick and the first problem there was one of medical service—taking care of these sick Indian children.

The Red Cross sent in 10 nurses. We supplied three nurses and three doctors. The Bureau of Indian Affairs supplied two extra physicians. Everybody in the town who was sick was immunized with gamma globulin. The town consists of only the people who operate the school and the hospital there, and among them there was only one more case after this immunization with gamma globulin. That occurred 2 days after the injection and it is obvious that the individual already had passed the incubation period and was just beginning to be sick when he was immunized.

This will not stop the course of the disease after it is started, but, if taken 7 to 10 days before the end of the incubation period, it prevents the appearance of the disease.

Mr. FOGARTY. Who developed this?

Dr. ANDREWS. Its application to infectious hepatitis was by Joseph Stokes at the Children's Hospital in Philadelphia—one of our consultants. It has been used for measles, of course, for quite a long time—to affect the so-called modified or attenuated type of measles.

We always want to prevent pneumonia in very young children with measles, so this material comes in very handy to use with children under 5 years of age.

Mr. DENTON. What have you done about measles besides that?

Dr. ANDREWS. I don't know that anything has been done of any great significance. The use of gamma globulin actually has changed the complexion of the whole measles problem. Gamma globulin cannot be used for mumps—that is, not normal gamma globulin—but, if gamma globulin is made from the serum of people who have had mumps recently, it prevents a large proportion of the complications of mumps.

One of the nice things about gamma globulin is that it lets the individual have the infection without being sick; so, he creates his own antibodies to the disease and becomes immune thereafter.

(Discussion off the record.)

Dr. ANDREWS. I thing that is all, Mr. Chairman, unless there are some questions you want to ask.

COST OF PAY ACT INCREASE

Mr. FOGARTY. Does the $287,000 proposed supplemental cover the entire cost of your pay act increase for 1952?

Mr. ABBEY. According to our computations, the actual cost will come to $319,000.

Mr. FOGARTY. So, you will absorb about $32,000?

Mr. ABBEY. $32,105.

EXPLANATION OF 1953 ESTIMATE FOR GENERAL EPIDEMIC AND DISASTER AID

Mr. FOGARTY. Under the heading "General epidemic and disaster aid," you show that you had 25 positions in 1952 and none in 1953. You are not asking for any positions in 1953, but you still are asking for $40,000, which is the same amount you show for 1952.

Mr. ABBEY. Yes.

Mr. FOGARTY. How do you account for that?

Mr. ABBEY. We have no way in advance of estimating what positions will be required nor what objective classifications will be required.

Mr. FOGARTY. Are these all reimbursable positions?

Mr. ABBEY. Yes.

Mr. FOGARTY. For what do you get reimbursed?

Dr. ANDREWS. We did this last year from the Kansas City flood.

Mr. ABBEY. But there are other years in which we must use positions provided for elsewhere in the appropriation temporarily—usually short-time employment—in connection with a particular epidemic. We have no way of estimating in advance what number of positions may be required because we don't know what epidemics or disasters will arise.

This particular 25 was reimbursed by the Housing and Home Finance Agency for Kansas City flood work.

NEGOTIATION FOR PURCHASE OF AIRCRAFT

Mr. FOGARTY. Did you buy those two airplanes that we gave you money for in the 1952 appropriation?

Dr. ANDREWS. They have not been purchased yet. Negotiations are under way.

Mr. FOGARTY. Why have you not purchased them?

Dr. ANDREWS. They have been trying to get some surplus planes from the Civil Aeronautics people, because we can get them more cheaply, and it has taken time to locate surplus planes. Perhaps Mr. Abbey can explain a little bit more about it.

Mr. ABBEY. The reason is that we cannot afford to go out and buy new planes. We only have $7,000 in this year's budget for the purchase of planes.

Mr. FOGARTY. What did we give you in the 1952 appropriation?

Mr. ABBEY. $7,000. We attempted for several months to obtain two planes from the Navy as surplus, and have not been successful in completing those negotiations. We are now engaged in negotiating with the Civil Aeronautics Administration to get two planes which we understand they have in mothballs somewhere. If so, we can get those at no cost to us for the planes, but it will take at least the $7,000 to condition and reequip them and convert them to our particular purposes. We think we will be able to get them.

STATUS OF WASHINGTON LABORATORY

Mr. FOGARTY. How about this laboratory in Washington? Is it in full operation now?

Dr. ANDREWS. Yes, sir.

Mr. FOGARTY. What are we spending a year on that?

Dr. ANDREWS. Just about $100,000.

Mr. FOGARTY. You received $100,000 in 1952, and you are asking for the same in 1953?

Dr. ANDREWS. Yes, sir.

Mr. FOGARTY. How long have you been in full operation?

Dr. ANDREWS. We have not been in full operation until last year—the first of last year.

Mr. FOGARTY. How long do you think this project is going to go on?

Dr. ANDREWS. It is hard to say at present. I think it is a very finite project. It is one that has a definite end point to it, and I should not think it would last for more than 2 or 3 more years, if it does that.

PASSENGER VEHICLES AND TRUCKS

Mr. FOGARTY. You are asking for 37 new cars. Are they all for replacement?

Mr. ABBEY. Yes, sir; they are all for replacement.

Mr. FOGARTY. You are asking for 30 trucks. Are they all for replacement?

Mr. ABBEY. The trucks are all for replacement, and we intend to reduce our truck fleet in addition to those traded in in this replacement transaction.

Mr. FOGARTY. They must be small trucks; are they not?

Mr. ABBEY. They are. Mostly pickup trucks, up to a ton and a half, is the greatest.

AIRBORNE DISEASE COMMITTEE

Mr. FOGARTY. Would you elaborate a little more on this airborne disease committee? What is that?

Dr. ANDREWS. That is composed of representatives from the National Institutes of Health, Environmental Health Center, and Communiciable Disease Center, and it acts as a coordinating agency so that the different aspects of the problem will be covered without duplication.

REQUEST MADE FOR CONSTRUCTION OF NEW BUILDING

Mr. FOGARTY. Did you request funds this year for that new building in Atlanta?

Dr. ANDREWS. Yes, sir.

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Dr. ANDREWS. $12,125,000.

Mr. FOGARTY. And the Bureau of the Budget refused the request?

Dr. ANDREWS. It was disallowed; yes, sir.

Mr. FOGARTY. Is it expensive to operate the old buildings at the present time?

Dr. ANDREWS. Very costly.

ESTIMATED COST OF OPERATING OLD BUILDINGS

Mr. FOGARTY. Have you any estimate of the cost of operating in and maintaining these old buildings in comparison to what the cost would be if you had a new building?

Mr. ABBEY. We have figures projected on the cost of the continued use of these buildings. We do not have the current operating cost segregated as such. But to continue to use the facilities at Montgomery and at Lawson, which are the ones proposed for replacement during the next 2 or 3 years—to maintain those places adequately and do what rebuilding will be necessary, we estimate will run to $421,000.

Mr. FOGARTY. The plans have been drawn, have they not?

Dr. ANDREWS. The plans are actually in usable shape now. The 1st of April they will be completed.

BUILDING SITE DONATED

Mr. FOGARTY. And the land has been donated to you.

Dr. ANDREWS. And the land has been donated to the Government by the Emory University. The project is already to go as far as we are concerned.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for in total this year?

Mr. ABBEY. We requested $6,881,000. Of that sum, $6,327,000 was in the so-called A budget and the remainder in the B budget.

PURPOSE OF AIRCRAFT

Mr. DENTON. Why do you need airplanes?

Dr. ANDREWS. For the application of insecticides experimentally, and we use them operationally in epidemic aid.

Mr. DENTON. You mean you spray them like a farmer does?

Dr. ANDREWS. Yes, sir.

Mr. DENTON. That is all.

Mr. SCHWABE. These airplanes which you requested last year, for which $7,000 was granted, was it used in the manner you described or for the transportation of persons?

Dr. ANDREWS. They cannot be used for the transportation of anybody but the pilot.

FURTHER REFERENCE TO BUILDING SITE

Mr. SCHWABE. I wanted to talk to you about the site for this new building down there. About 12 acres, isn't it?

Dr. ANDREWS. Fifteen.

Mr. SCHWABE. Fifteen acres?

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. I went out to see it, as you remember, with you and I believe Dr. Vonderlehr.

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. As I recall, the location had its advantages and disadvantages, right on the railroad and across from the university there where it would be sufficiently isolated, it was thought, to not be objectionable to the people in that vicinity, either the school people or the residential occupants there.

Dr. ANDREWS. That is correct.

Mr. SCHWABE. And yet close enough to give you all the advantages you would need for transportation and college accessibility, especially the laboratories, and so on.

Dr. ANDREWS. That is right.

Mr. SCHWABE. Is that transfer of property or donation by the university so conditioned that the building has to be built within a certain length of time?

Dr. ANDREWS. No, sir.

Mr. SCHWABE. Has the conveyance been made unconditionally?

Dr. ANDREWS. Unconditional title has been given to the Government.

Mr. SCHWABE. With reference to your present quarters out at Lawson, the Veterans' Administration installation there, about 12 or 13 miles out from Atlanta, you are occupying some of the buildings that, for the present, have been considered surplus by the Veterans' Administration, not needed immediately by them?

Dr. ANDREWS. That is correct.

Mr. SCHWABE. So these buildings are, to say the least, very undesirable for your purposes and all of them are of a temporary order?

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. Construction of all those buildings, as I remember it, is temporary in character.

Dr. ANDREWS. That is correct.

Mr. SCHWABE. However, so far as the adaptability is concerned, you do not contemplate, do you, making them adaptable to the extent and with the efficiency and accommodation as the new building would have? You will spend the minimum on maintenance that is necessary to carry on your work, is that right?

Dr. ANDREWS. That is correct.

Mr. SCHWABE. And that is all you are asking money for; enough to make them adaptable for the immediate necessities of your program?

Dr. ANDREWS. That is right.

Mr. SCHWABE. As I remember it, the heating and all of the plumbing is exposed to the weather.

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. Of course you do not have the severe cold weather down there that we have in the northern part of the country.

Dr. ANDREWS. We had a lot of cold weather last winter that froze all of the pipes, broke all the joints, and it was necessary to have new joints, elbows, and so forth.

Mr. SCHWABE. You pointed that out to me.

Dr. ANDREWS. Of course; yes, sir.

Mr. SCHWABE. Of course that had to be taken out of your appropriation because you were in occupancy of the premises that were affected?

Dr. ANDREWS. That is right.

Mr. SCHWABE. Not all of your activities are conducted from this installation at Lawson Veterans' Administration are they?

Dr. ANDREWS. That is correct.

Mr. SCHWABE. Some of them are at 50 Seventh Street?

Dr. ANDREWS. Yes, or at the Peachtree-Seventh Building. Part of our laboratories are at Montgomery, Ala., and our Technical Development Branch is in Savannah, Ga.

Mr. SCHWABE. Peachtree-Seventh is a very elaborate building as far as that is concerned, that you occupy there?

Dr. ANDREWS. That is right.

Mr. SCHWABE. And most of your administrative work is conducted from that downtown building; is that correct?

Dr. ANDREWS. That is correct; yes, sir.

Mr. SCHWABE. But of course, as I think you pointed out to me at the time, you could not have all of this laboratory work and research work with these smelly animals and other things that you have to use there

in the building that your administrative work is principally conducted from today?

Dr. ANDREWS. That is correct.

Mr. SCHWABE. So that you have a divided operation there, as I see it, largely administrative work in this downtown de luxe building, which is, as I ascertained, a very expensive building from the standpoint of rental charges.

Dr. ANDREWS. That is right.

Mr. SCHWABE. And this very miserable part of the Veterans' Administration at Lawson Hospital that you are occupying.

Dr. ANDREWS. Yes, sir.

OBJECT OF SAVANNAH INSTALLATION

Mr. SCHWABE. What is the connection between that and the installation down at Savannah Beach where Dr. Simmons is in charge?

Dr. ANDREWS. The Savannah installation is one of our branches. The Communicable Disease Center consists of seven branches, and that is one of them.

Mr. SCHWABE. Explain that a little bit. That is your largest branch, is it not?

Dr. ANDREWS. That was devised originally to provide the answers to operational problems as they developed. You see, for a number of years we were concerned in large-scale malaria control and to a lesser degree rat-control operations. Frequently they would run out of chemicals, perhaps the emulsifier that was used, the DDT, or solvents, or other chemicals of that kind. The object of this Savannah installation is to provide specifications for new materials which could be substituted for the same purpose, which presented no fire hazard, which were nontoxic, and to invent new and better methods of insecticiding and rodenticiding. Thus they have improved the technique of control operation. That is their principal function. They have become interested, of course, in the safety of these operations as well. That is why they have gotten into the consideration of the health hazards of the economic poisons.

Mr. SCHWABE. Dr. Simmons, who heads that, is a doctor of philosophy in chemistry, and not a physician, as I recall.

Dr. ANDREWS. He is a doctor of philosophy.

Mr. SCHWABE. And chemistry is his——

Dr. ANDREWS. I think he is an entomologist.

Mr. SCHWABE. Perhaps so. Was it not largely with the idea of obtaining an installation with isolation that it was established there?

Dr. ANDREWS. That was one of the considerations, yes, sir.

Mr. SCHWABE. And they operate there under your supervision, is that not correct?

Dr. ANDREWS. Oh, yes.

Mr. SCHWABE. It is out there to itself, but I am asking if it is not a fact that the equipment, at least so far as the principal building is concerned, is adequate there?

Dr. ANDREWS. It is so regarded.

Mr. SCHWABE. And it does not need a lot more for upkeep and so forth. Are you asking anything for upkeep out there?

Dr. ANDREWS. Nothing in addition to the ordinary maintenance of the building.

INADEQUATE GARAGE FACILITIES

Mr. SCHWABE. Doctor, part of these cars and trucks that you have asked for will go to Savannah?

Mr. ABBEY. Two passenger automobiles and two trucks.

Dr. ANDREWS. For replacement.

Mr. SCHWABE. Now I want to make this observation, Dr. Andrews. I do not know whether you have requested any money here for shelter or garage, we will say, for cars and trucks at the Savannah installation. I do not believe you have, have you?

Dr. ANDREWS. I do not think so.

Mr. SCHWABE. It has been my understanding that in the past some requests have been made but never did get to the committee, and I want to say that I observed a situation there that to me appeared very wasteful. When I was down there during the Easter recess, Mr. Chairman—I made this trip there on my own and what I found out was on my own and for the benefit of the committee, I hope—the trucks and cars were most of them in, because it was the Easter recess period with a few days' vacation perhaps for the employees, as well as myself. There they were lined up, weather-checked in that salt breeze that destroys paint very rapidly, and deterioration was going on at a very high rate. I said, "Why do you not put these under shelter or in a garage?" "Well, we have none." I found out in my investigation later that requests had been made but never reached this committee.

It is by such visitations that I have been able to find out that there are a lot of things that we do not know about, and under your routine you are not permitted to tell us about, to a certain extent. You are only here to defend those items which have been requested.

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. That does not seem like so much, but it is illustrative of several things that I have found out. I think that at Savannah you have got a problem that should receive immediate consideration. I want to suggest that it does receive consideration at your hands and through Dr. Simmons there, or whoever may be in charge in the future, to the extent that we will save on paint bills, deterioration, and so forth, and stop the dire waste that is going on today among our cars and our trucks that we buy.

I just want to say that, Mr. Chairman, as one of the illustrations that I can bring home as a result of that visitation there.

OTHER INSTALLATIONS

With reference to your Montgomery, Ala., plant: As to size it is not even comparable to Savannah, is it?

Dr. ANDREWS. That is true.

Mr. SCHWABE. It is very small, more or less pilot, plant?

Dr. ANDREWS. Well, it has grown to rather substantial proportions relative to what it was. But it still is not nearly as large as the Savannah installation. You would have found the same thing about the automobiles there.

Mr. SCHWABE. I know it. I was going to say that the same condition prevails down there with reference to cars, and with reference to other equipment. I only mentioned the cars and trucks because they were most obvious, you understand, in their deterioration.

But there were other items of equipment there that were suffering maltreatment and neglect.

With reference to the other installations now: You have one in Phoenix?

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. That is in connection with Phoenix University—a building owned by them, is it not?

Dr. ANDREWS. No, I do not think that those are university quarters. I think that they are privately rented quarters.

Mr. SCHWABE. I have visited there. What is the particular installation that you have there? I may not have the right one in mind.

Dr. ANDREWS. The poliomyelitis-fly control project.

Mr. SCHWABE. Yes, sir. You have a very small installation there.

Dr. ANDREWS. Yes, sir.

Mr. SCHWABE. Do you have any on the Pacific coast?

Dr. ANDREWS. In San Francisco, we have the plague laboratory there.

Mr. SCHWABE. But that is confined almost solely to the plague?

Dr. ANDREWS. That is an intramural operation, largely.

Mr. SCHWABE. And it is a small installation, too?

Dr. ANDREWS. Yes.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

Dr. ANDREWS. That is all.

Mr. FOGARTY. Thank you very much.

(The following tabulations were submitted later:)

Reported malaria morbidity and mortality in the United States, 1932–50

Year	Morbidity		Mortality	
	Number	Rate per 100,000	Number	Rate per 100,000
1932	68,613	55.0	2,540	2.0
1933	125,549	100.0	4,678	3.7
1934	133,222	105.4	4,520	3.6
1935	137,502	108.1	4,435	3.5
1936	133,927	104.6	3,943	3.1
1937	107,583	83.5	2,729	2.1
1938	84,206	64.9	2,378	1.8
1939	82,655	63.2	1,761	1.3
1940	78,130	59.3	1,442	1.1
1941	68,075	51.7	1,178	0.9
1942	60,071	45.9	861	.7
1943	54,555	42.8	647	.5
1944	57,629	45.5	580	.5
1945	62,763	49.2	443	.3
1946	48,610	35.1	341	.2
1947	16,215	11.4	214	.2
1948	9,797	6.7	170	.1
1949	4,241	3.0	118	0.08
1950	2,227	1.5		
1951	[1] 6,251			

[1] Provisional figure.

nnual total of reported murine typhus fever cases in the United States,[1] 1941–50

	Reported cases		Reported cases		Reported cases
941	2, 781	1945	5, 179	1949	984
942	3, 731	1946	3, 367	1950	683
943	4, 522	1947	2, 034	1951	[2] 284
944	5, 338	1948	1, 184		

Over 95 percent of all reported cases occur in 9 Southeastern States.
Total number of cases January through August 1951.

Engineering, Sanitation, and Industrial Hygiene

WITNESSES

. D. HOLLIS, ASSOCIATE CHIEF, BUREAU OF STATE SERVICES
UGH R. McCALL, SENIOR SANITARY ENGINEER
R. SEWARD E. MILLER, CHIEF, DIVISION OF OCCUPATIONAL HEALTH
R. J. W. MOUNTIN, CHIEF, BUREAU OF STATE SERVICES
. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
R. LEONARD A. SCHEELE, SURGEON GENERAL
OY L. HARLOW, CHIEF FINANCE OFFICER
. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
ppropriation or estimate	$3, 670, 030	$3, 648, 158	$3, 950, 000
roposed supplemental due to pay increases		119, 000	
eimbursements from other accounts	13, 987	60, 540	
Total available for obligation	3, 684, 017	3, 827, 698	3, 950, 000
nobligated balance, estimated savings	−16, 382		
Obligations incurred	3, 667, 635	3, 827, 698	3, 950, 000
omparative transfer to "Assistance to States, general, Public Health Service"	−49, 857	−56, 158	
Total obligations	3, 617, 778	3, 771, 540	3, 950, 000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct obligations			
Water supply and water pollution control	$1, 412, 822	$1, 350, 000	$1, 340, 000
Radiological health services	291, 970	451, 800	483, 000
Environmental research activities	425, 843	393, 000	620, 000
General sanitation activities	718, 712	747, 500	742, 000
Occupational health	650, 801	646, 000	644, 000
Administration	103, 643	122, 700	121, 000
Total direct obligations	3, 603, 791	3, 711, 000	3, 950, 000
bligations payable out of reimbursements from other accounts			
Water supply and water pollution control	10, 116	5, 600	
Environmental research activities		48, 540	
General sanitation activities	255	6, 400	
Occupational health	1, 181		
Administration	2, 435		
Total obligations payable out of reimbursements from other accounts	13, 987	60, 540	
Total obligations	3, 617, 778	3, 771, 540	3, 950, 000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Summary of personal services			
Total number of permanent positions	596	610	664
Full-time equivalent of all other positions	6	4	4
Average number of all employees	537	566	604
Average salaries and grades:			
General schedule grades:			
Average salary	$4,174	$4,646	$4,678
Average grade	GS–6.7	GS–6.7	GS–6.7
Crafts, protective, and custodial grades:			
Average salary	$2,606	$2,945	$2,947
Average grade	CPC–4.1	CPC–4.1	CPC–4.1
Ungraded positions: Average salary		$14,000	$14,000
Personal service obligations:			
Permanent positions	$2,610,058	$2,971,235	$3,138,747
Part-time and temporary positions	37,227	25,850	25,850
Regular pay in excess of 52-week base		6,940	7,720
Payment above basic rates	477	500	500
Total personal service obligations	2,647,762	3,004,525	3,172,817
Direct obligations			
01 Personal services	2,638,228	2,965,185	3,172,817
02 Travel	219,459	233,500	239,800
03 Transportation of things	39,933	28,800	28,700
04 Communication services	25,822	22,850	24,150
05 Rents and utility services	118,066	41,150	43,018
06 Printing and reproduction	115,220	148,250	150,450
07 Other contractual services	68,447	57,000	60,200
Services performed by other agencies		9,000	9,000
08 Supplies and materials	102,640	88,660	100,160
09 Equipment	273,969	112,730	117,230
13 Refunds, awards, and indemnities	223		
15 Taxes and assessments	1,784	3,875	4,475
Total direct obligations	3,603,791	3,711,000	3,950,000
Obligations payable out of reimbursements from other accounts			
01 Personal services	9,534	39,340	
02 Travel	3,374	1,400	
03 Transportation of things	192		
04 Communication services		1,200	
07 Other contractual services	195	800	
08 Supplies and materials	692	5,300	
09 Equipment		12,500	
Total obligations payable out of reimbursements from other accounts	13,987	60,540	
Total obligations	3,617,778	3,771,540	3,950,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year		$454,842	$480,298
Obligations incurred during the year	$3,667,635	3,827,698	3,950,000
	3,667,635	4,282,540	4,430,298
Deduct:			
Reimbursable obligations	13,987	60,540	
Unliquidated obligations, end of year	454,842	480,298	500,000
Total expenditures	3,198,806	3,741,702	3,930,298
Expenditures are distributed as follows:			
Out of current authorizations	3,198,806	3,175,000	3,450,000
Out of prior authorizations		454,842	473,158
Out of anticipated 1952 supplemental for pay increases		111,860	7,140

Buildings and Facilities, Cincinnati

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,400,000	$2,400,000	$350,000
Applied to contract authorization		−2,400,000	
Contract authorization	2,400,000		
Prior year balance available:			
Appropriation	69,991	60,785	55,225
Contract authorization		100,447	
Total available for obligation	3,869,991	161,232	405,225
Balance available in subsequent year:			
Appropriation	−60,785	−55,225	
Contract authorization	−100,447		
Obligations incurred	3,708,759	106,007	405,225

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Public Health Service building	$3,675,380	$68,000	$389,447
2. Design, supervision, etc	33,379	38,007	15,778
Obligations incurred	3,708,759	106,007	405,225

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
PUBLIC HEALTH SERVICE			
09 Equipment			$350,000
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
02 Travel	$223	$500	500
06 Printing and reproduction	500	500	
07 Other contractual services	48,984	44,007	15,278
10 Lands and structures	3,659,052	61,000	39,447
Obligations incurred	3,708,759	106,007	55,225
SUMMARY			
02 Travel	223	500	500
06 Printing and reproduction	500	500	
07 Other contractual services	48,984	44,007	15,278
09 Equipment			350,000
10 Lands and structures	3,659,052	61,000	39,447
Obligations incurred	3,708,759	106,007	405,225

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year		$3,602,446	$1,258,854
Obligations incurred during the year	$3,708,759	106,007	405,225
	3,708,759	3,708,453	1,664,079
Deduct unliquidated obligations, end of year	3,602,446	1,258,854	
Total expenditures	106,313	2,449,599	1,664,079
Expenditures are distributed as follows:			
Out of current authorizations:			
Out of appropriations to liquidate contract authorization		1,097,722	1,302,278
Out of new obligational authority	106,313		350,000
Out of prior authorizations		1,351,877	11,801

Water Pollution Control Grants

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,000,000	$900,000	$900,000
Prior year balance available	4,573	47,312	
Total available for obligation	1,004,573	947,312	900,000
Balance available in subsequent year	−47,312		
Obligations incurred	957,261	947,312	900,000

Obligations by activities

Grants to States and interstate agencies for industrial waste studies, surveys, and research:	
1951	$957,261
1952	947,312
1953	900,000

Obligations by objects

11 Grants, subsidies, and contributions:	
1951	$957,261
1952	947,312
1953	900,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year		$1,500	
Obligations incurred during the year	$957,261	947,312	$900,000
	957,261	948,812	900,000
Deduct unliquidated obligations, end of year	1,500		
Total expenditures	955,761	948,812	900,000
Expenditures are distributed as follows:			
Out of current authorizations	955,761	947,312	900,000
Out of prior authorizations		1,500	

Mr. Fogarty. We will now consider the estimates for "Engineering, Sanitation and Industrial Hygiene." Mr. Hollis, do you have a statement?

Mr. Hollis. I will speak, Mr. Chairman, from notes.

Mr. Fogarty. Go right ahead.

GENERAL STATEMENT

Mr. Hollis. Mr. Chairman, we have grouped under this appropriation five distinct but related environmental health programs of the Public Health Service. With your permission, I should like to discuss each of these programs very briefly with some emphasis on the items where there is a significant realinement in our approach.

WATER SUPPLY AND WATER POLLUTION CONTROL

The first item is water supply and water pollution control. The problem of pollution of water supply with human waste is an old one. It has plagued man through the ages. Before we understood germ

diseases and their method of transmission, the pollution of water by human wastes was a major cause of epidemics and death. In fact, our compact, modern civilization is possible only because we know the scientific facts relating to the spread of water-borne diseases, and accordingly, have been able to create structures and changes in our environment to protect ourselves from such diseases. With regard to human and other organic sewage, we know through treatment methods how to protect all uses of water against excessive pollution from these causes.

It is unfortunate that we have not as yet been able to solve the social and economic problems incident to putting this scientific information to work. Accordingly, over the past 50 years, as we have developed our cities and industries, pollution of surface waters has increased each year far beyond our corrective measures through construction of waste treatment works.

Water needs of our municipal and industrial machine—more than 90 billion gallons per day—are becoming such as to require considerable reuse of waste waters discharged from municipal and industrial sewers. Hence, treatment of these wastes before discharge is becoming essential to this reuse.

In the face of increasing demands upon our fixed water resources, we find over wide areas of the Nation serious situations with regard to water pollution. It is the result of a 50-year accumulation. Over this period our sewered population has increased from 24 million to 81 million. Our industrial production has increased 700 percent. It is significant that about half of this increase has been in the past 10 years.

As you gentlemen know, Congress recognized the mounting problem with passage in 1948 of the Water Pollution Control Act (Public Law 845). You will recall, Mr. Chairman, that your committee for the past 3 years has approved funds under this appropriation to carry out the fact-finding stage of the act; for limited effort at stimulating corrective measures through educational methods and through technical assistance to States; to work toward some uniformity of State laws and policies; and for initiating research in certain types of industrial waste for which there is no practical known method of treatment.

WATER-POLLUTION PROBLEMS AND PROGRAM PERFORMANCE

I should like to report to the committee the results of our work to date and to offer recommendations for the program through fiscal year 1953.

1. Having assembled and analyzed all data available through State and Federal sources, we have issued summary reports covering the 226 basins that comprise the 15 major watersheds in the United States. These reports represent joint statements of the Public Health Service and the States involved. In those areas where the pollution problem is quite involved, we will now work with the States to supplement these technical data in order that an up-to-date comprehensive blueprint of pollution-abatement needs might be arrived at. All of these data have been summarized and published in a national inventory of the water-pollution problem.

2. Perhaps the most important element in the Federal water-pollution-control program is stimulating cities and industries to put in

corrective measures. After all, that is the practical objective. All of these surveys, all of these data we gather in cooperation with the States, are but tools to support the economical construction of abatement works. This information has a technical value for the engineers. It also is used to set the facts before the public so that people will understand what they can buy with a given amount of money.

This is not a single-shot operation. As populations grow and industries develop, and as treatment methods change, it is necessary to take into account new facts about water-pollution control. It is an endless effort, with State and Federal authorities working together, to move ahead with construction of abatement works.

3. A suggested uniform State law has been worked out in close collaboration with the State and interstate authorities. This suggested law has been endorsed by the Council of State Governments and the principles enunciated in the document have been adopted in six States. Many other States are using——

Mr. FOGARTY. What States?

Mr. MCCALL. Ohio, Illinois, North Carolina, South Carolina, Kentucky, and Arkansas.

Mr. HOLLIS. We have also made considerable progress with groups of States in the several watersheds in working out some patterns of uniformity in policies between States. This is especially with respect to stream standards, to priority of treatment works and to agreements between the States on the recognized stream uses in the various basins.

4. With respect to research we have used approximately $400,000 each year of the appropriation to work with the States and industries on selected types of industrial wastes which are highly significant nationally and for which there is no practical method of treatment. These wastes are in the fields of synthetics, petroleum, wool scouring, and citrus.

STATISTICAL DATA ON SEWAGE PROBLEMS

I should like to show, Mr. Chairman, some charts that quickly summarize the total problem, and comment briefly on the proposal for 1953. The first chart relates to municipal sewage. For the purposes here today the data have all been translated in terms of people as the unit, rather than indicating the data in technical terms. The top line shows trends in the sewered population. As of 1950 sewage from 31 million population is discharged raw into the streams as shown by the green area. The cross-hatch of the chart shows a population of 29 million served by inadequate sewage treatment. This is due largely to obsolescence of the plants. Most of the treatment plants were built around 1920. Many of the plants we have now are beginning to be obsolete. This obsolescence is due also to population growth. However, 29 million have some form of treatment.

We have 22 million that had adequate treatment out of the 81 million.

The next chart relates to industrial waste, and again the industrial waste data have been computed in terms of people so that it will be uniform with the other chart. These data are expressed as population equivalent. On this chart, the lines indicate the trend of in-

dustrial development in the United States, first for organic waste, and for the type of industries that are producing organic waste.

We know that industries discharge organic waste equivalent to 50 million people from 2,131 industrial plants.

Based on our industrial waste guides which have been developed in Cincinnati and the production figures of 3,874 additional plants, we are able to compute, as a close estimate, that the waste from this group of plants is equivalent to 40 million people. The organic industrial waste total is 90 million population equivalent.

These figures are computed after treatment, so that they represent the results of the discharge into the stream. It is highly significant that there is a large increasing quantity of chemical wastes going into the streams, which I would like to comment on in a few moments. There are also some 2,800 plants that have wastes of undetermined character and strength to be added.

The acid mine drainage is 10,000 tons of acid per day, largely from abandoned coal mines. We have one composite chart that shows the cumulative effect of both the municipal and industrial loadings on the streams. With the 24 million people with adequate treatment taken as a base line of zero and moving up 29 million that are served by inadequate treatment, where some additional expansion is needed; 31,000,000 people discharging sewage raw into streams; known organic waste loadings, equivalent to 50 million people; and additional organic loadings equivalent to 40 million people; for a cumulative total of 150 million population equivalent of pollution going into the streams. Again the inorganic wastes are undetermined. There is no simple method of measuring that waste.

I would like, Mr. Chairman, by means of an illustration, to show the committee what this means in terms of what we need to do at the Federal level, and what we know, and what gaps we have in our scientific knowledge. This chart is purely for illustrative purposes. It is plotted with the magnitude of the problem and the magnitude of our knowledge against time. The chart shows the development of the water-pollution problem plotted from 1900 to 1952 and the growth of scientific knowledge—what we know about solving that problem. Up to 1925, the pollution problem is largely one of preventing the transmission of common waterborne diseases—the intestinal type diseases, such as typhoid fever, dysentery, and so forth. After the turn of the century, we quickly assembled the scientific knowledge that was needed to attack that problem.

That is both in terms of understanding how to treat sewage and in terms of developing the technology of treating public water supply. In the late 1920's, our scientific knowledge was approaching the magnitude of the problem of common water-borne diseases.

There still remains the possibility that water might carry some of the virus diseases that Dr. Andrews mentioned in his testimony. During epidemics, you find polio virus in sewage. What this may mean in terms of water-borne transmission we just don't know, but that is part of the problem.

In the early 1930's, the expansion of industries and the growth of our urban population was introducing another factor into the water pollution problem—the increasing economic factor relating to water needs—so that the curve of the problem began to take an upturn.

And now we have the problem that we wish to discuss today, the one of chemical contamination, the phenomenal rate of increase of our chemical production, and the chemicals that are getting into the streams.

What we propose to do then in 1953 is to aid the States in stimulating the construction of waste treatment plants for organic sewage, both in cities and in industries, to attempt to close the gap in that area. We propose in the area of increasing economic factors to work toward the development of a total water resource program for each of the river basins. In the more important ones, as you know, there have been set up interagency groups to study river basin development programs—the Missouri, the Columbia, the Arkansas, and so forth. In our research, we intend to probe into the problem of chemical contamination to learn how to measure it, and we hope to learn the significance of chemical wastes.

If I may, Mr. Chairman, I should like next to comment on the environmental research activities because they relate in part to the problem of water pollution.

Mr. FOGARTY. Very well.

ENVIRONMENTAL RESEARCH ACTIVITIES

Mr. HOLLIS. For the past 30 years, in our environmental research, we have geared our methods largely to developing techniques and methods for building and operating environmental facilities—such as public water supplies—so as to minimize the hazards of transmitting waterborne and related diseases. Since the time we understood the full significance of human sewage and human waste in spreading diseases we have worked on improving our methods of disposing of such waste. Originally the job was simple, the one of constructing sanitary privies. This was followed by our modern method of developing sewerage systems and sewage-treatment works. I think our present treatment of the water-supply field has behind it a vast amount of environmental research essential to that development. Coagulation, methods of filtration, chlorination, and use of carbon and other elements of our modern water technology had their beginning in laboratories that were designed and operated for environmental research in these fields. Similar research has been behind our rapid development in milk sanitation and pasteurization and methods of handling so that today the sanitary quality of milk delivered to the people is improving annually.

The development of the shellfish industry has behind it a great deal of basic research, much of it done in the Public Health Service, to insure its safe use by consumers long distances from the source of supply. Backed by this environmental research, basic sanitation has come a long way. Deaths from filth-borne disease are the lowest in our history. As a Nation we stand out in the world with our modern sanitation practices.

As the State and local health departments grow stronger, we are getting the upper hand on all the illnesses which result from contamination of water and food, particularly the intestinal diseases.

I have taken the time for that brief background, Mr. Chairman, because we are presenting today a proposal that represents some broadening in that research emphasis. I think in our zeal to solve the major environmental health problems affecting the transmission of

germ diseases, we have been somewhat negligent about other biological as well as chemical, radiological, and physical components of the environment.

STATUS OF NEW LABORATORY FACILITIES IN CINCINNATI, OHIO

Mr. FOGARTY. You are asking for quite an increase in that particular activity, aren't you?

Mr. HOLLIS. Yes, sir; the principal increase.

As you know, Mr. Chairman, the new environmental health laboratory at Cincinnati will be available for occupancy early in this new fiscal year, and this new building will provide, for the first time, the facilities that are needed in which to assemble the specialized and professional disciplines and competences suitable to investigate and pursue research on the changing problems of environment.

RESEARCH ACTIVITIES IN NEW BUILDING

Mr. FOGARTY. When that is opened, won't you be closing down some other laboratories?

Mr. HOLLIS. We will transfer from our old water and sewage laboratories the personnel into the new building. We would like to propose using the new building to get into one or two of these newer problems, particularly this problem of the chemical environment—increasing chemicals—because we do not yet fully understand the health significance of all these huge amounts of chemicals and chemical wastes from industries that are getting into the atmosphere and into the stream.

As a matter of fact, we don't as yet have the practical means to measure the exposure of human beings to these chemicals. We need to know a great deal more about the cumulative effects and synergastic effects of these chemicals. By synergastic, I refer to the fact that some chemicals do things in combination that they don't do separately.

For example, 1 ounce of copper and zinc in combination will more severely affect and attack the stream than will 20 ounces of copper or 20 ounces of zinc taken separately.

As more and more of these chemicals come into the water, the question is, What are the cumulative effects and the synergastic effects on human life? I would like to emphasize that we do not have evidence that the problem is as yet serious to the total public health. However, in some limited areas we do know that the concentrations are significant. The point I am trying to make is, with regard to our environmental facilities, we do not yet have the knowledge and instrumentation to measure the concentrations of chemicals and to delineate the types of chemicals that reach the people generally.

DEVELOPMENT OF NEW TECHNIQUES FOR WATER ANALYSIS

If I might be more specific, over the past 2 years in Cincinnati we have developed an extremely promising lead in connection with these unnatural chemicals in water supply. Our scientists have worked out a technique for concentrating the exotic chemicals from thousands of gallons of water supply into a few cubic centimeters (referring to exhibit). For example, in this vial here is a concentration of the chemicals in water as it enters a treatment plant. The method we are

using is an adaptation of a special carbon filter that we can insert in the water system. The filter inserted on the raw water side before treatment gives us this result (handing to the chairman). The committee might be interested in getting an idea of both the appearance and the odor of these chemicals. After the water has gone through the treatment plant, using the same new technique, we have extracted a composite of the chemicals that remain in the water after treatment. That happens to be the same water supply. In these vials are samples of six other water-supply systems on the finished water side—the water that is used for drinking and other purposes.

While this technique in itself is quite significant in that we, until now, did not have the technique by which we could concentrate the chemicals so that we could measure them, the value of the technique would be quite limited unless we had now a practical means to analyze these chemicals. Our present conventional methods of qualitative analysis of these complex chemical compounds are so involved and so costly and time consuming that they wouldn't be practical for normal use. Our next step is to work toward some means of practical analysis. I would like to refer here now to the method that we have under development which is merely application of the infrared absorption spectrometer to chemicals. We know, for example, that infrared light has a characteristic pattern of absorption of chemicals at different wave lengths, so with the proper machines we can determine the percent of transmission and actually produce a graphic chart such as we have here [refers to exhibit].

This top chart was actually prepared from waste in an industrial sewer. Downstream 30 miles we took a sample of the river water that was going into a water-treatment plant. We took a third sample of chemicals concentrated from treated water. In all three samples we can trace the same pattern. In other words, it is clear evidence that chemicals from industrial waste persist in the finished water in the public water supply. We can repeat the process and get an identical chart of that nature. Development of this technique replaces, first, the costly complex method of qualitative analysis, and, second, provides us with a simple means of machine measurement of the unnatural chemicals in drinking water.

I might add that we could reverse this course—find out what chemicals are in the water supply, if you have trouble, and go upstream to locate the source of pollution. If that is done, you can often eliminate the problem by economical in-plant adjustments at the source.

The significance of these chemicals in terms of the total public health is one problem; the other is in terms of economics. Because minute quantities of these chemicals often cause very serious taste problems in city water, cities use carbon in their treatment processes in an effort to take out and reduce the effects. Many cities in these areas use 300 pounds of carbon or more per million gallons, some up to a thousand. This factor alone increases the cost of water treatment from 300 to 400 percent, so that it gives some idea of what the problem is from a purely economical standpoint.

I have gone perhaps too far, Mr. Chairman, because of time, into this, and I am quite anxious that I don't de-emphasize the other phases of the research work proposed at the Cincinnati station.

Mr. FOGARTY. Take as much time as you want until about 4 o'clock.

SCIENTIFIC RESEARCH IN WATER-POLLUTION CONTROL

Mr. HOLLIS. In water pollution, for example, at present we are working toward some means of measuring the effect of water pollution over a sustained period of time. It is an application of the science of biology in water-pollution measurements that will give us what effect the pollution has had on a given stretch of stream over a period of months rather than taking a sample and getting the effects of the pollution at that particular moment.

We are hopeful that we can bring to bear the science of physics into our waste treatment as a means of both improving the efficiency of waste treatment and reducing the high cost of treating sewage and waste. We also think there definitely are needs to modernize our laboratory control techniques. For example, in the field of bacteriology we have worked with this membrane filter [indicating] that I am sure the committee has heard about.

It offers a means, we think, of reducing the rather involved time-consuming bacteriological examinations of water and of milk samples, and so forth. The significance of the filter is (1) that you can use larger quantities of the samples to be tested, (2) you can decrease the time from days to hours, and (3) you can reduce the cost by better than 30 percent.

We also believe this development is significant because we think it is a means of handling the rural water problem—rural water supplies at schools and farms. It is interesting today that we are spending $25,000,000 a year in the Nation—cities and States and public laboratories—on the bacteriological examination of water alone, so that an effort to reduce the cost 30 percent would be highly significant.

Perhaps the most significant point is that, if needed, the filter would be quite important in defense against biological warfare. In short, Mr. Chairman, on research we are quite enthused about the possibilities and opportunities that we think we will have with our new environmental health center in Cincinnati.

RADIOLOGICAL HEALTH-SERVICE PROGRAM

If I might mention a word on radiological health services, which is another program under this estimate, the estimate provides for carrying forward on this activity the program that we put before the committee last year.

This program as you know is in its third year. In general the activities aimed at developing knowledge in the techniques necessary for the State and local health departments of the Nation to meet the impact on health of the emerging atomic age. We know the use of radioactive materials is increasing in industry and in medicine and in research. In recent months the Chairman of the Atomic Energy Commission, in a national broadcast, outlined the progress that is being made in the development of the industrial potential, utilizing fissionable materials. As these developments materialize, so will the related health problems.

Mr. FOGARTY. The Atomic Energy Commission is working on that?

Mr. HOLLIS. Yes, sir. They are working on the protection of individuals.

Mr. FOGARTY. Aren't they doing research on some of those streams, too?

Mr. HOLLIS. Cooperatively with us. It is a joint undertaking.

Mr. FOGARTY. How much is AEC spending on it?

Mr. HOLLIS. In terms of total expenditure by the Atomic Energy Commission I don't know the figures. I might add that our effort is really in three fields: (1) To increase the level of knowledge and understanding of the State and local people, which is the training program; (2) to develop a means of providing information to the States, with interpretation of the technical information as fast as it becomes available for public use; and (3) of course, our research. Our research is in cooperation with the Atomic Energy Commission, and it has three objectives: First, to develop a practical method of handling and disposing of radioactive waste. This work is under way at the Los Alamos installation. Second, we wanted to observe the behavior of radioactive wastes in natural waters. We know, for example, that they don't follow established formulas and equations for dilution and dispersion. This is under way at the Hanford Works, and will be pursued at the Savannah River project.

Lastly, we wanted to develop a means first of detecting and then removing radioactive materials from public water supplies. This work is being carried on at Oak Ridge. I might say that in terms of research, that we have well passed the pilot plant stage in developing methods of treating radioactive wastes, and we have now a full-scale plant in operation at Los Alamos. Of course the plant itself was constructed by the Atomic Energy Comission, not by ourselves.

On water decontamination at Oak Ridge, we are now in the pilot plant stage of operation, working out ways and means of decontaminating the public water supply. The estimate also includes work that we are proposing at the Savannah River project. That is at the specific request of the Atomic Energy Commission and is being carried out as a joint project with the du Pont Co., which is the contractor for that new AEC installation.

Mr. FOGARTY. Are they reimbursing you for that?

Mr. HOLLIS. Not for our part of it; no, sir. We are not attempting to develop a broad competence in the total atomic field. Our aim is to interpret the effects of these wastes in terms of public health, to bring to bear the public-health competence and to develop the needed techniques as control responsibilities are assumed by States.

Ultimately this has got to go to the State and local people as the problem widens and broadens.

GENERAL SANITATION ACTIVITIES

The other program in this appropriation, Mr. Chairman, relates to our general sanitation activities. I would like very much to save time for discussing the industrial-hygiene program which is also in this estimate. Our general sanitation activities are proposed to be carried on at a slightly reduced level in comparison with the current fiscal year. This is the division in the program that is the workhorse of the Service in the sanitation field. This is the program that carries out the day-to-day routine-sanitation services that come within the responsibility of the Public Health Service.

For example, half of the estimate of this item is for the interstate-carrier sanitation program. That is a program that is geared to protect the sanitation of interstate carriers used by the traveling public. These carriers as you know are beyond the jurisdiction of any individual State. This activity also has in it a national shellfish certification program which is carried out jointly with the States. The program of milk and food sanitation is in this item, as well as the community sanitation and home- accident-prevention activities.

We are hopeful that we can at least begin in 1953 to meet the increasing pressures on us in connection with the interstate certification of milk, if only to the extent of putting one professional man and a clerk in that field of activity.

OCCUPATIONAL HEALTH ACTIVITIES

Mr. Chairman, regarding the program of industrial hygiene or occupational health, if you will permit, I would like very much for Dr. Seward Miller, who is Chief of that activity, to comment very briefly on it.

Mr. FOGARTY. All right, Dr. Miller.

Dr. MILLER. Mr. Chairman, gentlemen, this appropriation supports the activities of the Public Health Service in occupational health. These activities have been previously presented to you as industrial hygiene.

Sickness absenteeism, illness among our industrial workers, is one of our biggest occupational health problems. It accounts for about 500,000,000 lost man-days per year or the equivalent of 2 million industrial workers. The loss in wages has been calculated at about 4.3 billion dollars. The extent of lost production is practically incalculable. This is a problem which deserves much attention, particularly in these times.

We have been engaged for numbers of years in occupational-health studies, industrial emergencies, and basic toxicological, chemical, and engineering research in this field.

EXAMPLES OF WORK PERFORMED

I would like to point out a few of the examples of our work in each of these three categories. In 1949 we undertook a large-scale investigation of the foundry industry in this country. The report and recommendations we wrote on the health patterns in the foundry industry were transmitted not only to those industries that we examined but also to the Foundry Industries Association for application in all foundries throughout the country.

They were so impressed, and were also impressed by their own lack of foresight, that they have established a research and study industrial hygiene set-up of their own, available to all their members for serving the foundries throughout the country.

In 1950 we worked in every chromate factory in this country, and conditions were pretty bad in some of them. The principle hazards—chromate is a very caustic chemical which not only produces damage to the skin and perforation of the nasal septa, but also respiratory disease, and lung cancer. We examined 897 individuals and we found 509 perforated nasal septa alone. The conditions many of these men were working under were simply atrocious. We were able

at the end of the examination to establish techniques by which these real caustics, mists, fumes, and particles, could be controlled, the health of the workers preserved, and industry still go ahead with production.

In fact, some of our suggestions have resulted in increased efficiency at certain places. Only one factory building was so obsolete that we had to recommend complete rebuilding of that factory, and that industry has built a new factory and their efficiency and productivity has been considerably increased since moving into the new building.

An interesting side light: One case we found in our examination presented a small lesion in the lung with no symptoms at all. It was our feeling that it represented an early cancer of the lung. The patient submitted to surgery, lobectomy, and it was an early cancer. I think we saved one life in this instance.

FIELD STUDIES OF INDUSTRIAL HEALTH HAZARDS

This past year we have been engaged for the most part in a field of study of the health hazards connected with uranium mining and milling in the Colorado Plateau area, which takes in parts of four States, Arizona, New Mexico, Colorado, and eastern Utah. We have had long experience in hard-rock mining, as you may know. Actually our early studies in the 1930's were the basis for the Utah State Workmen's Compensation Commission, the present State laws. In addition to the usual hazards of hard-rock mining—silicosis and others—here we have the added hazard of radiation. We are now in position to furnish the industry and the State health departments of these States with a preliminary report on the total situation. It is not a short-term study, and the hazards involved are considerable. Next year that will be our major field of study.

In the medical emergencies—we have large numbers of these from many industries, way beyond our ability to keep up with and to answer—we have had two rather interesting ones during the last year which you might like to know about. Two copper smelters, and big ones in this country, got into real trouble during this past year that resulted in acute emergency calls to us.

There were 10 deaths and a large number of acutely ill individuals from arsene poisoning. Arsene is a nearly colorless and practically odorless gas, with a slight carlic odor. These industries know that in the smelting processes arsene gas is generated, and they had alleged detectors around for it, but these detectors failed to work, which resulted in undue generation of this arsene gas. The laborers know that hazard perfectly well, and they were so apprehensive that they would not go back in one of the smelters to work until we had not only instituted controls, but actually had ourselves, our own men, work on those positions for a matter of 2 days in that atmosphere, to convince them, before they would go back on duty.

Resulting from that study are ideas for a continuous recorder that will perhaps flash a red light and blow a horn when a dangerous level of arsene gas develops in the atmosphere. I think it is almost a necessity for the industry, for we are going to have recurrent episodes such as we had during the past year, despite the best of our engineering advice and ability. That research is well under way, the industry is interested and they are sending us some help, chemists, and materials, to continue with it during this coming year.

Another acute emergency that happened to us is quite interesting: A large instrument manufacturer in this country, making X-ray, radar, and radioactive measuring devices and equipment, having large contracts with the military forces, had in their instrument-standardization room a capsule of radium sulfate immersed in the floor, of course, in a lead container. When they standardized instruments they would pump it up, to a given level. One morning when they pumped it up to start work they found a cloud of dust particles, mist, evolved from it. The men in the instrument-standardization room were quite apprehensive.

They called the plant manager, who had been a member of the Oak Ridge staff, and who had very good basic training. He rushed up and not taking their word, he pumped it a few more times and it spread 50,000 lethal doses of radium sulfate into the air. They recognized then what it was. This shows what we will do in an emergency, one man rushed and threw the window open while the second fellow blew this mist out of the window instead of confining it to the space and getting out immediately.

One unfortunate thing was that the ventilating intake was right next to where they blew this out, and the ventilator sucked it in and distributed it all through the factory. They had no means to control it and didn't know how to decontaminate the individuals.

We were called and within an hour were there and were able to rapidly decontaminate the individuals, advised them on follow-up care, and advised them how to decontaminate the factory and get them back into operation at the earliest possible time.

Samples and blood studies were taken immediately. There were over 200 people involved. There were 12 people who had by our measuring devices and instruments received a real hazardous amount. We believe, however, that none will suffer permanent damage because of the early decontamination. The third phase of our activities that I should perhaps portray to you is the constant introduction into the industrial world of new chemicals by the thousands. The plastic industry is the latest industry to bring new ones in. Many of them are introduced without the slightest, or with very little, knowledge of their toxicity and probable toxic effects and hazards. Perhaps you remember the tremendous difficulties that we had with fluorescent lamps that had beryllium put in them—berryllosis among industrial workers—large amount of compensation claims, deaths, and suffering resulting from its use. Consequently then we are examining the plants to determine the toxicity of these new products and chemicals being used in industry, developing substitutes where they are necessary, or working out how the health hazard can be controlled and the industry still function.

Among studies that are now under way are the toxicity of cobalt, which has been alleged to cause allergic manifestations. We are now, by some basic research, convinced that it is the contaminant nickel that is usually present in cobalt that really causes the trouble. A very fabulous new heat-resisting metal has been introduced—titanium, for use in rocket engines, we have no knowledge of its toxicity or how to handle it. Those are the kinds of problems we are involved in constantly. The numbers of chemicals being introduced, the amount of calls on us for information and help swamp our resources quite beyond our means. We try to set priorities of those that affect the

most people, the same as we do on our field studies, and those which have the greatest health hazards.

Mr. FOGARTY. Who did this work previous to 1951? When did you get your first appropriation?

Dr. MILLER. This is an old-time appropriation.

Mr. FOGARTY. Under what division of the Public Health Service was it?

Dr. MILLER. Industrial Hygiene.

Mr. HARLOW. It was under the appropriation "Assistance to States, general" before it was consolidated in this appropriation.

Dr. MILLER. In the early 1930's it started in as a separate budget.

Mr. HARLOW. This was at the time when we had a separate appropriation for industrial hygiene.

Mr. FOGARTY. Thank you, Doctor. Had you finished that statement?

Mr. HOLLIS. Yes, sir.

SUPPLEMENTAL APPROPRIATION TO COVER COST OF PAY ACT

Mr. FOGARTY. You are asking for a supplemental of $119,000 for the pay-act increase. Does that cover the entire cost of the pay-act increase for 1952?

Mr. MCCALL. No, sir; it does not.

Mr. FOGARTY. How much do you estimate the total cost of the Pay Act increase to be for 1952?

Mr. MCCALL. For 1952 it was $147,000.

Mr. FOGARTY. You are absorbing $28,000?

Mr. MCCALL. Yes, sir.

ADDITIONAL INFORMATION ON USE OF NEW BUILDING

Mr. FOGARTY. You are asking for a large increase for environmental activities. Mr. Hollis, in a couple of minutes tell us the reason for constructing this new building at Cincinnati and what savings are going to be accomplished.

Mr. HOLLIS. The building is being built to house the Environmental Health Center staff in Cincinnati. This staff works on water supplies, water pollution, milk and food, and so forth, and also carries on training operations. At present these operations are in five different locations and four separate buildings, all rented. This building, of course, would house that staff and provide for the extension of research into other fields of environmental health.

Mr. FOGARTY. How many people are working in these buildings at present?

Mr. HOLLIS. There are 239.

Mr. FOGARTY. They will all be transferred into this new building?

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. Then you are going to ask for 53 additional positions and they will all be housed in that new building?

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. Will that be the complete staff then?

Mr. HOLLIS. No. The building will be finished early in the fiscal year 1953, before we complete our staffing pattern and staff for the new operation.

FURTHER INCREASE ANTICIPATED IN 1954

Mr. FOGARTY. So you will be coming back next year and asking for a further increase in positions?

Mr. HOLLIS. Yes, sir. We would like to, because until now we have not been able to get into these newer problems, and if I may, Mr. Chairman, I would like to reemphasize the rapidity with which this industrial production is on us especially significant is the chemical industry.

For example, the Chemical Journal shows, in plastics alone there is a 700-percent increase in the production of plastics since 1939, from an index of 200 to an index of 1,500.

The New York Times, in its issue of September 2, 1951, devoted a section to the increasing problems of chemical production. It shows from 1941, for example, to 1950 that the chemical industrial expansion has been from an index of about 200 to an index of 450, which is over a 100-percent increase, as compared with an all-industrial increase from an index of 160 to an index of 200 or about 25 percent.

It is significant that later figures show that the 1951 production of plastics will be two and a quarter billion pounds, when we think that 10 years ago we had a production figure of less than 400 million pounds.

As I mentioned, half of the industrial expansion has been in the past 10 years. We don't know how far it is going, but at the current rate of expansion the effects of all the chemicals that are getting into air and into water are increasing rapidly and we feel that we ought to find out what the problem is and how to measure it.

Mr. FOGARTY. Has all the money been appropriated to complete this building at Cincinnati?

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. You are not asking for any additional?

Mr. HOLLIS. The only additional that we are asking for is for scientific equipment which is under the appropriation, "Building and Facilities, Cincinnati, Ohio."

Mr. FOGARTY. How much does that amount to?

Mr. HOLLIS. $350,000.

ALLOCATION OF GRANT FUNDS FOR WATER POLLUTION CONTROL

Mr. FOGARTY. For grants to States you got $900,000 last year and you are asking for the same this year.

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. Do you have a table here showing 1952?

Mr. HOLLIS. Yes, sir. At pages 67 and 68.

Mr. FOGARTY. We will put that in the record at this point. That is the allocation for 1951 and 1952. Do you have the proposed allocation for 1953?

Mr. MCCALL. No, sir.

(The tables for 1951 and 1952 follow:)

Grant-in-aid allocations for water pollution control, fiscal years 1951 and 1952

State or Territory	Allocation 1951	Allocation 1952	State or Territory	Allocation 1951	Allocation 1952
Alabama	$19,500	$19,500	New Jersey	$18,000	$17,100
Arizona	10,100	9,300	New Mexico	9,900	9,500
Arkansas	16,400	15,000	New York	34,800	34,400
California	28,400	27,100	North Carolina	22,600	22,400
Colorado	11,000	10,300	North Dakota	9,400	8,700
Connecticut	12,000	11,200	Ohio	25,900	24,900
Delaware	8,600	7,800	Oklahoma	16,000	14,500
District of Columbia	9,800	8,700	Oregon	12,100	10,400
Florida	14,900	15,100	Pennsylvania	33,700	31,400
Georgia	19,600	19,800	Rhode Island	9,700	9,000
Idaho	9,600	8,700	South Carolina	16,300	15,801
Illinois	25,100	24,700	South Dakota	9,500	8,800
Indiana	18,100	16,900	Tennessee	19,400	19,000
Iowa	15,100	13,700	Texas	29,900	29,400
Kansas	13,100	12,200	Utah	9,900	9,100
Kentucky	19,300	18,300	Vermont	9,100	8,700
Louisiana	17,300	16,600	Virginia	17,300	17,400
Maine	10,500	9,800	Washington	13,400	12,500
Maryland	12,800	12,500	West Virginia	14,300	13,600
Massachusetts	18,500	17,700	Wisconsin	16,200	15,300
Michigan	22,400	21,600	Wyoming	8,700	7,900
Minnesota	16,200	15,000	Alaska	8,700	7,800
Mississippi	18,600	17,600	Hawaii	9,400	8,400
Missouri	18,700	17,400	Puerto Rico	18,900	17,800
Montana	9,100	8,500	Virgin Islands	8,100	7,300
Nebraska	11,300	10,500			
Nevada	8,300	7,500	Total	[1] 825,000	[2] 782,500
New Hampshire	9,500	8,600			

[1] An additional $175,000 was reserved for allotment to interstate agencies for industrial waste studies, and to States and interstate agencies for special industrial waste studies of national or sectional importance.

[2] Includes $47,312 from 1951 appropriations. These allotments are provisional and final allotments within these amounts will be made in accordance with regulations upon receipt of applications from State water pollution control agencies. An additional $164,812 is reserved for allotment to interstate agencies for industrial waste studies, and to States and interstate agencies for special industrial waste studies of national or sectional importance.

Mr. FOGARTY. Is there going to be any change in the allocations to the various States?

Mr. MCCALL. There may be minor changes, but the allocations will be made on the same formula basis.

Mr. HOLLIS. $8,000 for each State plus their pro rata share on a population and financial need basis.

Mr. FOGARTY. What did you put in reserve for allotment to the interstate agencies for 1952? You had $175,000 in 1951. Is that right?

Mr. MCCALL. In 1951 the allocation for interstate agencies was $90,408. In addition, an allocation of $51,540 was made to States for special industrial waste studies.

Mr. FOGARTY. Where were those studies made?

Mr. MCCALL. In Massachusetts, Texas, Ohio, Minnesota, Wisconsin, and Washington. There were six separate projects in operation covering these special industrial waste studies.

EXPLANATION OF BUDGET ESTIMATES FOR BUILDINGS AND FACILITIES, CINCINNATI, OHIO

Mr. FOGARTY. In 1952 you had $2,400,000 appropriated for the Cincinnati building and $161,000 carry-over from the previous year. I notice from your table that total obligations are $106,000 in 1952. What does that mean?

Mr. McCALL. Those figures were supplied to us by the General Services Administration.

Mr. HOLLIS. Mr. Chairman, as you may recall we had a contract authority to construct the building. Of course the Public Buildings Administration were in charge of the construction, and these sums in here [indicating] were to liquidate that contractual authority for construction purposes.

Mr. FOGARTY. What is the additional $350,000 for this year?

Mr. HOLLIS. That is for scientific equipment to go into the building.

Mr. FOGARTY. That is what you were talking about before. What does this $389,000 represent?

Mr. McCALL. $350,000 of this amount is for the scientific equipment.

Mr. FOGARTY. Where is that in the breakdown?

Mr. McCALL. On page 77.

Mr. FOGARTY. $350,000 for equipment, and land and structures $39,447. What does that mean?

Mr. HARLOW. That will be carried over from the previous year's appropriations by the Public Buildings Administration and it is their estimate of what they will spend in connection with the building next year.

Mr. FOGARTY. How do we know that they are going to need that?

Mr. HARLOW. No more than their statement to us, Mr. Chairman. I would judge that they have contracts which called for that.

Mr. FOGARTY. Will you find out and supply that for the record?

Mr. HARLOW. Yes, sir.

(The following was subsequently submitted:)

Fifteen thousand seven hundred and seventy-eight dollars is to take care of part of the overhead—the supervision of construction work under contract, to see that terms of the contract and Federal laws governing conditions of employment on such contracts, etc., are complied with; $39,447 is the Public Buildings Service estimate of costs for minor modifications and changes as construction proceeds, and for contingencies that may arise during the final months of construction. It is about 1 percent of the total cost, which their experience shows is usually required for such purposes.

PREVENTIVE MEASURES TO AVOID WORK DUPLICATION

Mr. FOGARTY. Mr. Hollis, are you sure in your own mind that there is no duplication of the work you are doing and the work that the Atomic Energy Commission is doing in research on radiation, and toxic effects of fissionable materials? It seems to me there is some duplication between what the two of you are doing in some of these areas.

Mr. HOLLIS. We are sure that there aren't, as we have some safeguards. There is, as you may know, an interagency committee composed of a representative of the Department of Defense, Atomic Energy Commission, and the Public Health Service and that committee meets twice a year to review all the work that is in progress in this field and to see what is going on. Of course, our research work is going on at the AEC installations. We are doing that because first they provide the physical facilities, and the big item, of course, is the cost of protection of the workers against radiation. In a recent figure released they point out that on the basis of 2,000 people in the laboratory, it costs $204 per person per year to provide the safety protection. They have a system set up, so by doing our

research within their facilities, we are able to get that service provided through their machinery.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for this year?

Mr. MCCALL. A total of $4,961,000, of which $4,525,000 was included in the budget.

AUTHORITY OF GOVERNMENT TO CONTROL WATER POLLUTION

Mr. DENTON. In this new code that you have regarding pollution of streams, do you require a permit from anybody who uses the sewer-supply system when they dump these chemicals and other dangerous things into the stream?

Mr. MCCALL. We don't.

Mr. DENTON. Does the act provide for it?

Mr. HOLLIS. No, sir; the act places the responsibility for the regulatory control of the pollution on the States so there is no provision in the act for Federal control. The only regulatory provision of the act is in the event of interstate pollution, pollution of one State affecting another State.

Mr. DENTON. In that kind of case is there any regulation requiring a permit before doing anything of that nature?

Mr. HOLLIS. Not at the Federal level; no, sir.

Mr. DENTON. It seems to me that when industries pollute the streams, and that is an old common-law nuisance anyhow, that they ought to pay for the damage that they are doing. It is costing the Government a good deal of money, and it is going to cost the States a good deal more. There ought to be some way worked out that they would have to pay for the damage they did.

Mr. SCHWABE. If it is a common-law liability, it is already worked out.

Mr. DENTON. It is a common-law liability; yes, sir.

Mr. HOLLIS. We are more concerned about the damage that it is doing to waters that have to be used than we are in terms of dollar value of such damage.

MEMBERSHIP IN INTERDEPARTMENTAL AGENCY ON FLOOD CONTROL

Mr. DENTON. I appreciate that. I guess it is a rule of law that is older than the Government in that respect: that they pay for the damages if they do that way.

Do you belong to the interdepartmental agency that works on flood controls in the various river basins?

Mr. HOLLIS. We are a member; yes, sir.

Mr. DENTON. Do you think that all ought to be worked out as whole river-basin problem—the problems of navigation, flood control, and hydraulic power, irrigation, drainage, soil conservation, and all that ought to be considered one problem for the whole river valley?

Mr. HOLLIS. I think there must be one comprehensive program of water development taking in all that you suggested.

Mr. DENTON. Take a case like the Tennessee Valley, where there is only one agency that handles it. Does that work better—do you think—than an interdepartmental agency?

Mr. HOLLIS. I do not know that it does. Either one will work.

Mr. DENTON. I am interested in that because I live on the Ohio River, and of course we are having a big flood there right now. It has been very piecemeal, what has been done on the Ohio River.

What is your feeling about it—that it is better to have one agency or different departments in there?

Mr. HOLLIS. I do not think you could get a single agency that could cover it all across the board when you consider how complicated water use is. There might be one composite, with the States and the Federal interests represented, or some mechanism that would provide one authority.

Mr. DENTON. That is what they have, an interdepartmental agency—also on the Missouri Valley.

Mr. HOLLIS. Yes, in the States.

COOPERATIVE WORK WITH TENNESSEE VALLEY AUTHORITY

Mr. DENTON. In the Tennessee Valley, where there is one agency, do you do sanitation work, or does the TVA do it?

Mr. HOLLIS. We work closely with the Tennessee Valley Authority. Actually, in terms of the extent that we have gone into the problem, they have gone so much further in the Tennessee Valley that we are not duplicating anything. We merely utilize their data in terms of these national summaries.

Mr. DENTON. Did they carry out a program of sewage disposal through that valley themselves, or did you do it?

Mr. HOLLIS. No. The Tennessee Valley Authority, in cooperation with the States, did it. We were represented on their work in terms of consultation with them and at times have assigned specialists down to work with them.

Mr. DENTON. You sent them specialists?

Mr. HOLLIS. Yes, sir.

PROBLEMS OF INTRA- AND INTER-STATE SEWAGE DISPOSAL

Mr. DENTON. There are no Federal funds available for these sewage-disposal plants along the river; are there?

Mr. HOLLIS. No, sir.

Mr. DENTON. I wanted to ask that, because they have issued these orders all through my district, which is on the Ohio River, and they write to me that they have not any money and cannot afford to pay for the work that is required to comply.

What does the Government do? I think that in advanced planning the Government advances money for that sort of thing.

Mr. HOLLIS. Yes.

Mr. DENTON. Of course, the Ohio is an interstate stream.

Mr. HOLLIS. An extremely important one, too.

Mr. DENTON. They raised the point with me that taking care of their own sewage disposal is of no more benefit to them than the people downstream.

Mr. HOLLIS. That is what I meant by the inability to solve the economic and social problems. By the term "social" I meant an awareness of the people of their responsibilities to the downstream neighbors as well as awareness of the people upstream of their responsibility; that, until we can create that, it is going to be difficult to make real inroads on the sewage-pollution problem.

Mr. DENTON. That is what I said. Unless it covers the whole river valley, I do not see where you are going to get anywhere. That is not only with regard to sanitation; that is everything—flood control, navigation, power, and everything that goes with it.

Mr. SCHWABE. That would be true of intrastate streams, would it not, in principle?

Mr. HOLLIS. Yes.

Mr. SCHWABE. They do not have funds provided by the States any more than the funds are provided by the Federal Government for interstate streams in the matter of sewage disposal and regulation. Isn't that true?

Mr. HOLLIS. That is true generally; yes, of course, with minor exceptions.

Mr. SCHWABE. I mean generally. It is a matter of local financing, whether the stream be an intra- or an interstate stream. Is that not generally the case?

CONSOLIDATED HEADQUARTERS

You will have consolidated headquarters by reason of the occupancy of this new building in Cincinnati. That is right, is it not?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And, of course, that is going to cost more money than it has cost in the past for your activities over all, is it not?

Mr. HOLLIS. Not for what we are doing now; no, sir. It would be more economical for our limited operations.

Mr. SCHWABE. Of course, you would not have to pay rent. That is what you are talking about primarily, is it not?

Mr. HOLLIS. And more efficiency.

Mr. SCHWABE. I understand, but I am talking about the expense of operation of your activity. Primarily the difference is that you will not be paying rent in the future. Is that not primarily the difference?

Mr. HOLLIS. That is right.

Mr. SCHWABE. So far as the level of your present activities is concerned, assuming no great expansion.

Mr. HOLLIS. That is right.

Mr. SCHWABE. But you are asking for the privilege of expanding and for enlarged operations and opportunities of study and research and all that goes with your service; is that not correct?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. These environmental studies have really more or less just begun to come into their own, have they not? It is a comparatively new field?

Mr. HOLLIS. Of course, it has been with us through the ages.

Mr. SCHWABE. I am talking about so far as your activities are concerned.

Mr. HOLLIS. These new ones, yes, sir.

Mr. SCHWABE. Your shellfish environmental study, for instance.

Mr. HOLLIS. That we have been on for about 20 years, working out the shellfish problem.

Mr. SCHWABE. You have not done much with it in 20 years; have you?

Mr. HOLLIS. I think we have.

Mr. SCHWABE. You have one installation at Woods Hole.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. Do you have any other installations?

Mr. HOLLIS. No, sir.

Mr. SCHWABE. And one man and one woman up there; is that not right?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. That is what I found there.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. You do not mean to tell us that you are doing a great big active project in connection with that small facility and operation there in the building of the—I believe it is Fish and Wildlife; is it not, where you occupy a small portion of space?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. That man may be ever so good, and as far as I know he is—I am not making any criticism as to the personnel—but you cannot cover too much territory there; can you? I found he was out on the west coast and all over the country, as far as that is concerned, in some of his work.

Mr. HOLLIS. He is working on one specific problem.

Mr. SCHWABE. Primarily?

Mr. HOLLIS. Yes, sir, primarily. The soft-shell clams.

Mr. SCHWABE. He was on the west coast this last summer studying some situations out there; was he not?

Mr. HOLLIS. We had to use him on another emergency.

Mr. SCHWABE. I do not know how he got out there, but he was out there, I know. He was working on some shellfish environmental studies out there; was he not?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. Related studies?

Mr. HOLLIS. That is right.

Mr. SCHWABE. Where can you point to any great accomplishments you have made, although that has been in operation for 20 years, we will say?

Mr. HOLLIS. We have established a method of controlling the production areas of shellfish. For example, shellfish production occurs near mouths of rivers and estuaries of major bodies of water. The problem back in 1926, when we had our major epidemics of typhoid and related diseases from shellfish, was because we had no standards, no methods of determining whether the shellfish produced in area A was safe or not. That has been worked out so that the States can patrol the shellfish areas.

Mr. SCHWABE. And do, so far as they are controlled?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And they make their own inspections in many instances, as far as they are inspected; is that not correct?

Mr. HOLLIS. Practically all of them.

Mr. SCHWABE. And should do it, do you not think?

Mr. HOLLIS. Yes, sir; I do.

Mr. SCHWABE. Go ahead.

Mr. HOLLIS. By sampling the water we can determine the level of pollution affecting the shellfish in that area. In one particular area at Hampton Roads the oyster beds between Newport News and Old Point Comfort, representing an industrial development of several million dollars, had to be closed because of water pollution. We were called in in 1933 to work out a plan whereby the human sewage affecting that area could be controlled so that these large producing areas could be reopened.

That was done and at an expenditure of some $90,000,000 by that local area.

Mr. SCHWABE. Industry took care of that largely; did they not?

Mr. HOLLIS. The cities put in a treatment; industries put in a treatment. There was no Federal expenditure.

Mr. SCHWABE. Industry today is conducting great research programs along these lines; are they not?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And you are encouraging that, I hope.

Mr. HOLLIS. We certainly are.

APPROPRIATION LANGUAGE CHANGES

Mr. FOGARTY. Do you have any language changes?

Mr. THOMPSON. There is one—reference to section 314 (c) of the act, has been inserted in this appropriation.

Mr. FOGARTY. What is 314 (c)?

Mr. THOMPSON. As it applies to this appropriation it will authorize the radiological health training program.

Mr. FOGARTY. Why do you need it in there.

Mr. THOMPSON. The attorneys who reviewed our appropriation last year suggested that it should go in.

Mr. HARLOW. That may not be an acceptable reason, Mr. Chairman.

Mr. FOGARTY. It doesn't explain the matter to me.

Mr. HARLOW. The attorneys did suggest putting it in there in order to be sure that what we do in the way of training out of this appropriation is covered by basic legislation. The basic legislation authorizing the State and local health work is in section 314 (c) of the Public Health Act. That goes back to the suggestion made by this committee a couple of years ago or perhaps more, that all of the engineering activities be consolidated under one appropriation.

In pulling out the engineering training from the appropriation of assistance to the State we neglected to bring over the 314 (c) reference in the appropriation language.

Mr. FOGARTY. Thank you very much.

WEDNESDAY, JANUARY 30, 1952,

HOSPITAL CONSTRUCTION PROGRAM

WITNESSES

DR. JOHN W. CRONIN, CHIEF, DIVISION OF HOSPITAL FACILITIES
CHARLES HILSENROTH, ASSISTANT TO THE CHIEF, DIVISION OF HOSPITAL FACILITIES
DR. JACK MASUR, CHIEF, BUREAU OF MEDICAL SERVICES
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

GRANTS FOR HOSPITAL CONSTRUCTION

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$110,000,000	$182,500,000	$154,700,000
Applied to contract authorization	−100,000,000	−100,000,000	−79,700,000
Contract authorization	75,000,000		
Prior year balance available:			
Appropriation			10,000,000
Contract authorization	91,881,485	34,080,943	
Total available for obligation	176,881,485	116,580,943	85,000,000
Balance available in subsequent year:			
Appropriation		−10,000,000	−10,000,000
Contract authorization	−34,080,943		
Contract authorization not required for obligation	−57,034		
Obligations incurred	142,743,508	106,580,943	75,000,000

Obligations by activities

Grants for hospital construction:	
1951	$142,743,508
1952	106,580,943
1953	75,000,000

Obligations by objects

11 Grants, subsidies, and contributions:	
1951	$142,743,508
1952	106,580,943
1953	75,000,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$141,764,651	$177,741,822	$129,212,937
Obligations incurred during the year	142,743,508	106,580,943	75,000,000
Total	284,508,159	284,322,765	204,212,937
Deduct unliquidated obligations, end of year	177,741,822	129,212,937	77,931,994
Total expenditures	106,766,337	155,109,828	126,280,943
Expenditures are distributed as follows:			
Out of current authorizations: Out of appropriations to liquidate prior-year contract authorization	106,766,337	80,300,000	79,700,000
Out of prior authorizations		74,809,828	46,580,943

Salaries and Expenses, Hospital Construction Services

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,257,000	$1,166,465	$1,217,000
Proposed supplemental due to pay increases		72,500	
Total available for obligation	1,257,000	1,238,965	1,217,000
Unobligated balance, estimated savings	−9,449		
Obligations incurred	1,247,551	1,238,965	1,217,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Operations and technical services activities	$1,149,123	$1,140,579	$1,117,311
2. Administration	98,428	98,386	99,689
Obligations incurred	1,247,551	1,238,965	1,217,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	192	191	191
Full-time equivalent of all other positions	2		
Average number of all employees	192	176	176
Average salaries and grades:			
General schedule grades:			
Average salary	$5,318	$5,949	$5,918
Average grade	GS–8.5	GS–8.6	GS–8.6
Crafts, protective, and custodial grades:			
Average salary	$2,412	$2,765	$2,818
Average grade	CPC–3.0	CPC–3.0	CPC–3.0
01 Personal services:			
Permanent positions	$1,061,153	$1,085,896	$1,084,135
Part-time and temporary positions	7,495		
Regular pay in excess of 52-week base		3,769	3,765
Total personal services	1,068,648	1,089,665	1,087,900
02 Travel	84,105	90,000	80,000
03 Transportation of things	3,984	6,000	3,500
04 Communication services	3,179	3,400	3,200
06 Printing and reproduction	8,641	15,000	9,000
07 Other contractual services	46,158	9,500	9,500
08 Supplies and materials	14,001	15,000	14,000
09 Equipment	18,438	9,900	9,400
15 Taxes and assessments	397	500	500
Obligations incurred	1,247,551	1,238,965	1,217,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$123,327	$159,595	$95,815
Adjustment in obligations of prior years	304		
Obligations incurred during the year	1,247,551	1,238,965	1,217,000
Total	1,371,182	1,398,560	1,312,815
Deduct:			
Unliquidated obligations, end of year	159,595	95,815	57,000
Obligated balance carried to certified claims account	2,547		
Total expenditures	1,209,040	1,302,745	1,255,815
Expenditures are distributed as follows:			
Out of current authorizations	1,112,535	1,075,000	1,160,000
Out of prior authorizations	96,505	159,595	91,465
Out of anticipated 1952 supplemental for pay increases		68,150	4,350

Mr. FOGARTY. The committee will come to order. The committee has before it this morning the request for the item "Grants for hospital construction." Dr. Cronin, have you a statement for the committee?

GENERAL STATEMENT

Dr. CRONIN. I have no formal statement. I would like, with your permission, to make a few remarks.

This program is popularly known as the Hill-Burton program. It operates under Public Law 725, Seventy-ninth Congress, which is the Hospital Survey and Construction Act of August 13, 1946, as amended by Public Law 380 of the Eighty-first Congress, passed on October 25, 1949.

PROGRAM PURPOSE AND FINANCING PROVISIONS

The purpose of the program, primarily, was to accord hospital care throughout the United States by means of assisting the communities which are in dire need of hospital services by giving them financial aid in the construction of their hospitals, health centers, and related facilities on the matching-grant basis.

As you know, in the early years of the program the Federal share on each project was restricted by law to one-third of the total cost of the project. Due to the amendment, Public Law 380, this was revised and the amount of the participating Federal share is determined by the designated State agency which, with the exception of all but eight States, is the health department. In those eight States a separate organization of the State government was set up primarily to administer this program in the State.

So, the State agency and its advisory council made up of members of the health profession—doctors, dentists, pharmacists, and sanitarians—along with representatives of rural groups, labor groups, educational activities, and the ministry or clergy within the State got together and drew up the State plan. That State plan indicates the needs for hospitals in the State and also the priority of different areas of the State for getting the Federal money, based again on need for hospital services.

FUNDS APPROPRIATED 1948 TO 1952

These State plans are predicated upon a survey for which the Congress of the United States provided money on a matching basis of two-thirds by the State to one-third Federal contribution. The State carried out the survey work and reported on the need for hospital service. The program has been operating effectively and there have been no major difficulties.

In 1948 Congress appropriated $75,000,000; in 1949, $75,000,000; in 1950, $150,000,000; in 1951, $85,000,000, of which $75,000,000 was provided in the first session of the Congress and $10,000,000 in the second session; in 1952 they appropriated $82,500,000, making a total of $467,500,000 in the total appropriations from Congress.

In the original act and in the extension of the original act which occurred on October 25, 1949, there was authorized by the Congress $150,000,000 annually through June 30, 1955.

FUNDS FOR NEW CONSTRUCTION AND LIQUIDATION OF CONTRACT AUTHORITY

This current year we are requesting $75,000,000 in new construction, for 1953, $60,000,000, to liquidate the early contract authority which has piled up; and $19,700,000 which was to put us on a strictly cash basis in the future years, and thus do away with the contract authority mode of operation; that is a total of $154,700,000.

PROGRAM PROGRESS

Now, I would like at this time, and would regard it as a privilege, to tell you what has happened to this program to date. I would like to do that by use of several maps. At the current time, December 1951, we have approved 1,700 hospital and public-health center and related projects; 775 are completed; 760 are under construction; and 165 are in the planning stages.

GEOGRAPHICAL DISTRIBUTION OF PROJECTS

The first map I show you locates the general-hospital projects in the country. It is superfluous to point out, but for the sake of the record, I wish to state it is impossible to relate the size of the dots indicating a project, on a scale basis, to the vast extent of our country. I am a little bit afraid of creating the impression that we have enough hospitals in this country. We do not. There is a very great dearth of them—the deficiency is 870,000 hospital beds.

The first map shows the general hospital. The significant thing is to show that every State in the Union, the four Territories, Alaska, Virgin Islands, Puerto Rico, and Hawaii, and the District of Columbia have all availed themselves of this opportunity to acquire Federal funds to accomplish that which they tried to do and were unable to do. They have availed themselves of this program to the effect that they have been building hospitals and health centers.

The control of all these projects rests with the community and we are not permitted in any way, after the completion of the hospitals, to have anything to do with the administration or operation of the hospitals in any community.

As you can see, most of these general hospitals are located in the Southeast States and in the vast Middle West. That is because of the economic situation in those States. Because of this and the medical situation so far as hospitals are concerned, and because of the fact that there are less hospitals needed in the Northeast since they had numbers of hospitals before this program started, there are not as many projects in the Northeastern States.

There was during the depression years from 1929 to 1939 very little money for constructing hospitals. People were doing their best to eke a living and could not contribute to hospitals.

In the war years from 1939 to 1947, when the program got under way, materials were not available since it was going into armament. So, we had 18 years of very little hospital building.

The pattern of these hospital projects basically is this: In the Northeast, or where they had hospitals, it was not new hospitals that were needed but rather additions to hospitals. At present there are about 6,200 hospitals exclusive of the Army and Navy, veterans', Public

Health Service, and Indian service hospitals, which provide 1,010,000 acceptable beds. All these hospitals are hospitals rendering care to the people of the country. They are rendering this care differently in relationship to the pattern for such care in the various States and parts of the country.

For instance, I will show you South Carolina, which shows a relatively small number of general hospitals. They have put the emphasis on health centers. The modern medical program is a combination of curative medicine and preventive medicine. The hospitals and health centers will permit in the community where the individual lives the facilities for him to be kept well and to preserve his economic status.

In South Carolina because of the heavy population and low per capita income, as is true in most of the Southeastern States, there are a greater number of health centers being erected as compared to the number in other parts of the United States. The emphasis is being placed on prevention. This offsets the utilizing of hospitals only where the patient is moribund. The health centers play a great role in health education and prevention of disease.

The northern pattern has included hospitals because, economically, they have been able to include them.

The act was patterned to get hospitals into the rural areas. The act is accomplishing that purpose. I will speak of that later.

I should like to show you before we go on with this, the second map which indicates public-health centers. It shows the geographical distribution of these public-health centers. You see where they are located. It brings out northern pattern of medical economy and health centers. You find this heavy concentration of hospitals in the Southeastern States. It is due partly to the previous lack of industrialization which, however, is now changing and the Southeastern States are becoming industrialized.

Mr. DENTON. Why some blue ones?

Dr. CRONIN. They are what I personally consider a very interesting and a very enlightening approach to hospital and medical care. The blue dots are combination hospitals and health centers. That is a pattern that has developed primarily in Ohio, Indiana, Kentucky, Tennessee, and some other States and which is spreading into Virginia, Texas, California, Idaho, Colorado, and Nebraska and other States.

These blue dots indicate where they built combination hospitals and health centers. Many of these areas did not have a hospital before and often the health department was up over a barber shop or had other inadequate quarters. So, the community felt a modern hospital and health center was a combination of a curative and preventive medicine and therefore the combination, was the wisest thing to do. So, they have built a hospital with these other facilities. Thereby they reduce costs in laboratories, in X-ray equipment; and instead of having one X-ray in the center of the town and another one elsewhere, they have the facilities in one area and they can cut down on all their expenses. It has worked out well in some areas and they do cut down on all their expenses when operated by the county.

In some areas it has not been tried. There are 46 of these combination hospital and health centers and there are 265 public-health-center projects.

The next map which I will show you shows the hospital projects that are not just general hospitals. They are tuberculosis, mental health, chronic-diseases projects, and two State laboratories shown here.

You can see these are distributed throughout the country and again in certain areas where tuberculosis and mental diseases require them, so they build this type of hospital; to a much less extent this is true of chronic diseases. I predict in the future we will see much more of the building of chronic-diseases facilities after the general acute-disease facilities have been taken care of. It is a major problem before our Nation what to do with the aging population and how to handle them properly when they need institutional care. One way is to provide facilities adjacent to hospitals so that the competencies mobilized at a modern hospital can be utilized as needed.

To sum up, you have seen the distribution in the States of the Southeast and Midwest where they have concentrated most of their funds on the general hospital. Some areas have been able to provide a more diversified picture of services in hospital construction and have included mental health, tuberculosis, and chronic diseases.

NUMBER AND TYPES OF PROJECTS

In the summation, we have 1,700 projects; 1,234 general-hospital projects; 265 public-health centers; 46 combination hospital and health-center projects, and over 150 specialized tuberculosis, mental disease, and chronic-disease projects.

One significant fact is very outstanding. On the large map there are 410 general hospitals that have been approved under this program which are in communities which never had a hospital bed before. One hundred sixty-five new hospitals in communities in which there existed a hospital which was not recognized as a hospital by the designated State agency. It may have been a physician's home where he vacated the second floor and made architectural changes and provided 5, 6, 8, or 10 beds. They are nonacceptable. They are fire hazards and do not meet some State building codes. So, we have over 600 of these new hospitals in communities that had either no hospitals at all or hospitals not recognized as such.

AMOUNT OF FEDERAL AND MATCHING FUNDS

I would like also to point out a chart to you which shows the dollar picture of the Hill-Burton program. This chart shows the total amount of Federal money matched by sponsor's money for Hill-Burton projects in our total economy. At the current time that is $1,275,000,000 in the hospital health-center building program. The money came from one source—the taxpayers of the country; but it came to them in two ways: (1) By direct contribution to their own individual facility building in campaigns in their own areas; and (2) it came back to them from general tax funds which they had paid into the United States Government. The amount of money which has been returned to the communities is $445,000,000. That money has been increased by $830,000,000 so we have a program here made with the cooperation of the communities to the total of $1,275,000,000. That has resulted, as you can see, in 1,700 projects as of December 1951.

Now, what have these 1,700 approved projects accomplished?

They have reduced our past deficiency of hospital beds in this country by a total of 81,000 beds. As I explained before, the States and Territories are required to submit annual revisions of their State plans. These annual revisions are important because they make the States take into cognizance the fact that they have added beds which might change the priority of areas within the State.

HOSPITAL-BED SHORTAGE

Based on the total number of beds in the country, I would like to show you another chart which will illustrate the bed deficiency in the country.

This chart shows you the total hospital beds in the United States, exclusive of the Army, Navy, Veterans, and Indian Service, and Public Health Service hospitals. As I told you before, there is approximately 1,010,000 acceptable hospital beds in this country. There are approximately 200,000 beds nonacceptable. Gradually the States are trying to replace them if the area need is sufficient to gain a priority.

I might point out that we are running a race about 2 inches ahead of the man behind so far as the hospital-bed picture is concerned in this country.

FACTORS CONTRIBUTING TO PRESENT HOSPITAL-BED SHORTAGE

When the program started it was estimated on the basis of these State plans that there was a deficiency of 900,000 hospital beds. We have cut down that number by 81,000 but at the same time there are several other factors which are always pushing up that 900,000. One is the increased population of the country which has increased quite a bit since 1947. The second is the utilization of hospitals due to the trend of medical practice in our country. The hospital has become essential because it is there we have the instruments of precision required in current medical practice so that the doctor may become less of an educated guesser. Science has provided the tools and he wants to use them. These are the X-rays, the cardiographs, encephalographs, and highly complicated laboratory procedures by which we gain information about the patient. These tools are developed by utilization of the physical sciences. So, for diagnostic reasons, patients are put in hospitals where formerly they would not go there. This deficiency of 874,000 beds is influenced by this factor and it is an important one.

I do not want to put my justification of this appropriation request on a defense basis. I have a firm conviction, however that an all-out defense program for our country must take into consideration the availability of the physician and his coworkers and their technical skills committed to care of people. In this over-all picture of mobilization, there will be physicians removed from their communities into the military forces thereby throwing a load on the physicians left in the communities.

I know of no better way than to effectively utilize the services and time of these physicians than by the congregation of patients in the hospital rather than require the physician to travel about the country. I have a classmate currently practicing in one of the Southern States. He was inquiring about how to get a hospital for his community. He said, "I had to go 15 miles to give a blood transfusion

to a farmer's wife. It took me about three-quarters of an hour to drive out, 25 minutes to give the blood transfusion, and then I had to stick around for about an hour to see if she would have a reaction which sometimes happens, and it took me another three-quarters of an hour to return to my office. If we had had a hospital in my community I could have hospitalized her and taken care of her in 25 minutes and also cared for other patients in the hospital in the three-quarter hour coming and going. I could have accorded better care and conserved my time and made myself available to other sick people in the community."

Mr. FOGARTY. What was the cost of that service to that particular lady?

Dr. CRONIN. So far as his care was concerned? In the first place, I know the quality of care she would have acquired in the hospital would have been better than the quality of care in her home. She would have had nurses in attendance at the hospital. At home she had the service of her husband. In the hospital she would have had that vast backing up behind the patient one finds in a hospital staff if anything had gone wrong. In the home the physician would have been over a barrel. He would not have had the laboratory services, the oxygen therapy, and so forth. So it is a question of what potential attention can she get for the dollar invested in medical care that she cannot get in her home. In my opinion that differential in the dollar value in the hospital surpasses the value in the home. I think the physician was perfectly right. They need a hospital in that community, and the patient would then be better off, and others in need of the physician's services would have a better chance of receiving then.

As I told you before, this estimate of 900,000 beds deficiency, which has been reduced to 874,000, is not an estimate of the Federal Government. These 53 State jurisdictions and the advisory councils have defined their needs, and we have done nothing more than compile this statement of them. I should like to refer you to this chart which shows the base line here above which are unmet needs. The unmet needs are:

	Beds
General	232,000
Tuberculosis	55,000
Mental health	329,000
Chronic	258,000

Below the line is the segmented breakdown of the existing beds that make up the 1,010,000 figure:

	Beds
General	469,000
Tuberculosis	85,000
Mental	416,000
Chronic	40,000

I think that gives us a pretty accurate picture of the hospital-bed situation in this country. While we are making satisfactory progress in cutting down the past deficiency, I would like to again emphasize the three factors we are working against—the trend of modern medical practice, the increase of population, the need to conserve the doctor's time.

NEED FOR MENTAL AND CHRONIC-DISEASE HOSPITALS

Very little progress has been made in the country in meeting the mental and chronic-disease bed need, and this is understandable. The community will more readily understand why they should have general hospitals rather than mental and chronic-disease hospitals. An educational program needs to be conducted, not necessarily by the Federal Government but by the medical profession, the hospital administration group, and others interested in this matter.

HOSPITALS AND HEALTH CENTERS AS AN AID TO DEFENSE EFFORT

We have a dual responsibility in our hospital program, particularly in this era of mobilization and defense preparation. It is very important to realize that our problem in dealing with common enemies is not so much manpower necessarily. I think we would have a lot of trouble competing on a manpower basis. We have to fall back on skill and technology and what some might call technocracy—the skill of our people in the military, the agricultural, and the industrial fields on which we primarily are basing our hopes. Our strength lies in that area. It does not lie in manpower numbers alone. It is in the training and skills of our people. Anything that can be done to aid and develop the skills of our people—in technicians, of military, of agriculture, of industry—that is our real responsibility if we are to survive in this present world.

The health of our people is very important, and people who are well are better people and better workers. I think one of the primary assets of our country is the worker who can stay on the job, whether in the military, in agriculture, or industry. He can do so if (1) he is well, and (2) if he is not needed at home because his family is sick.

Through these community hospitals that we are building, because four-fifths of them are in communities of less than 25,000, that is important. The core of the country is in communities of less than 25,000. In fact, primarily it is in communities of less than 10,000. If we have hospitals and health centers in these communities to carry out health maintenance, we have done a great deal to supplement the mobilization in military, industry, and agriculture, and related fields.

VALUE OF HOSPITAL CONSTRUCTION ON PERIPHERY OF TAGET AREAS

As I pointed out last year, and I point out again, many of these projects we are building are adjacent to target areas. Should disaster befall us, whether by an atomic bomb, or other types of bomb, or anything else, such as by making people sick by biological means, a lot of these hospitals being in those target areas will accord great service. We are building in reality the evacuation centers for our large cities.

Last year, we discussed what might happen to our large cities, if we did have a catastrophe. I pointed out we had to have hospitals and they would serve better if on the periphery of the target areas. It is my opinion, therefore, that the construction of hospitals adjoining to and on the periphery of these target areas is sound. We are not unmindful in administering this program that the President has called for dispersion of the essential industrial and community facilities of which hospitals are a vital part. You disperse from congested areas

and you land in rural areas. The Hill-Benton program with 80 percent of its hospitals being built in towns of less than 25,000 will be important.

Mr. BUSBEY. I might amend that. The dispersal program of the President has not been universally accepted.

Dr. CRONIN. Thank you, Mr. Busbey.

PROBLEMS OF EQUIPMENT AND MATERIAL SHORTAGES

There are two other questions you would want to know about. As Administrator of this program, they have bothered me and I have done my best to find the answers. First, whether there will be available the necessary equipment and materials to support the program. The difficulties in construction have been sporadic. None of the problems in the building of these hospitals have been insurmountable. We have 800 finished and in operation.

We are confident that the allocations of materials for building and equipment of hospitals will be made on the Controlled Materials Plan. The Public Health Service has been designated as the claimant agency in the hospital and health field. The Defense Production Administration has set aside the steel, copper, and aluminum for the fourth- and first-quarter construction in the health field. The Division of Civilian Health Requirements in processing applications, has been able to take care of all projects underway with certain exceptions for copper- and brass-mill products. Copper is one of the shortest items in supply. There have been worked out substitutions for some of these brass mill projects. For instance, brass kick plates on doors can be replaced with plastic without seriously affecting the use of the door. The Public Health Service has worked hard and also have the State agencies and NPA on this problem. Only 15 of the 225 requests for permits were deferred; 12 of them to the fourth quarter and 3 to the first quarter of this year.

For new starts in the fourth quarter of 1951, 297 of 380 applications were approved. For the second quarter allocations are now being made and all the previously pending applications will be approved.

I would like also to point out here that the Hill-Burton projects are not getting preferential treatment. There has been some slow-down on new starts. The allocations made by DPA for hospital construction have been quite equitable. We are now in the darkest period with respect to material shortages and I am advised the situation will improve with the third quarter of 1952. I would like to call attention to a quotation from Mr. Charles Wilson in his third quarter report to the President—

> Expansion has now been pushed far enough along by the industries involved to give us some deliveries of basic materials from new plants. Other plants are enough advanced to indicate some shortages of basic materials will be considerably relieved by the middle of next year.

which will be July 1953.

To sum up this aspect of the program, barring an unforeseeable event, such as a global war, our difficulties with materials shortages are being solved.

AVAILABILITY OF PROFESSIONAL PERSONNEL

The second question is the personnel question of staffing these hospitals. Now, considering this question for next year a factor which cannot be ignored is the availability of professional personnel. Our attention has, from time to time, been directed to the fact that a hospital or hospital wing was not able to open because of the lack of trained personnel, particularly nurses. We have been concerned with determining whether such instances justified the generalizations which have been made. We secured information in November 1951 on the 740 Hill-Burton projects then completed and in operation. The facts acquired do not support a generalization that the Hill-Burton hospitals are today unable to open because of lack of staff. The overwhelming majority, 713 projects, 96 percent, gave no indication that personnel shortages prevented opening. Typical of our experience was that reported by the State agency director, Dr. John A. Ferrell, of North Carolina, who, with 49 projects completed, wrote:

> * * * No project or part of a project constructed in this State under the Hill-Burton program has experienced delay in its opening due to a shortage of qualified personnel. Moreover, it has been noted in this State that in a number of rural areas trained nurses and technicians who had left their hospital positions to marry and settle down in communities having no hospitals have returned to hospital positions upon the completion of hospitals in their home communities.

Under conditions which have intensified the problems of staffing new health facilities, the ability of the Hill-Burton hospitals to open with a minimum of delay and to provide the range of services for which they were planned has been quite remarkable. Only 27 projects—4 percent—of the 740 opened had to delay opening due to an inability to staff the hospital properly. Almost all of these have since opened and are operating fully.

There is more trouble in the centers of large population. In these areas we find that the big problem is whether the number of beds being built are adding to the total number in the community or are replacements. If they are replacements you do not have the nursing shortage. If they are adding to bed numbers, conceivably you may have.

In the smaller communities the problem is solved by attracting physicians to move to areas which heretofore had no facilities or retaining physicians who had planned to move to areas with facilities. Smaller communities have also been successful in persuading nurses residing in the community but not practicing to reenter their profession.

Admittedly, all of the 740 projects which, up to November, had been completed, were not rendering the maximum range of services, nor were they complete with the most desirable staffs, either quantitatively or qualitatively. In a new hospital, as with most new enterprises, operational progress is gradual. Our Atlantic region's experience, perhaps, is typical.

There were 169 projects completed in this region, of which 10 reported having experienced difficulties. In only one instance was there a delay in opening. On the other hand, many of these hospitals that were open reported that they could use additional registered nurses, X-ray and laboratory technicians, and occasionally a physician.

In the larger cities, in some instances, no problems have been encountered. In others, the situation can best be described by quoting from the report of another State agency director, Mr. Vincent Otis in Wisconsin:

> It is our belief that the real shortages, particularly in the field of nursing personnel, will show up more predominantly when huge additions to large general hospitals now under construction in urban areas prepare for the day of opening. For example, an additional 800 to 900 beds in one community certainly will create some sort of shortage, but how serious is not yet known. If the experience in the larger cities parallels that of our smaller communities, namely, the spreading out of crowded and difficult conditions into a more normal space, the problem will not be too serious. However, if the total number of beds to be added is to go beyond a reasonable expansion required to merely eliminate overcrowding, then, of course, there will be a more serious problem in obtaining the additional personnel needed.

SIGNIFICANCE OF HOSPITAL IN COMMUNITY

One other factor of personnel I would like to indicate to you is this: The significance a hospital has to a community and its importance in conserving essential medical, nursing, technical, and other health personnel and their time. The hospital serves as the mobilization point, or the facility, in which trained personnel are concentrated. The physician is thus able to accord greater patient coverage and more effective utilization of his extremely limited time. It seems to me, therefore, that in the present and coming years of shortages of trained personnel and yet increasing needs for medical and hospital services, the provision of an increasing number of functionally sound and utilitarian hospital facilities, which have been the result of community recognition of need, is an effective means of assuring maximum utilization of available personnel.

One other factor not to be forgotten is that the new hospital attracts the physician to the local community. For example, in 7 communities in Mississippi, 12 physicians are reported to have located in these areas. In Georgia, 43 physicians located in 13 communities which built hospitals under the program.

In summing up, I sincerely think there is a need for continuation of this program and a need for continuation of the program at whatever level Congress, in its wisdom, sees fit in relationship to our whole economy. The program must be directed to accord health services to the people who need them. With a shortage of 874,000 beds in this country combined with the factors I mention creating more bed shortages, I would strongly urge continuation of the program, and in the full amount being requested.

EFFECT OF REDUCED APPROPRIATIONS

I might add one more point. Last year we discussed the result of reducing the $150,000,000 to $75,000,000 whereby 88 comunities were seriously affected. They had floated bond issues and levied taxes and had to be stopped because there was not enough money to give them assistance. Of these 88 postponed projects listed in last year's hearings, 52 have now been approved for $18,180,227. I do not think it will be fair to say all 88 will be taken care of because it is not true. Some of them will be unable to be taken care of so far as Federal assis-

ance is concerned until there is more money put into the over-all program for allocation on the formula basis to the States.

Mr. FOGARTY. Thank you, Doctor.

PROBLEM OF HOSPITALS MEETING OPERATING EXPENSES AFTER CONSTRUCTION

Mr. DENTON. Do you find that some hospitals have difficulty in meeting financial obligations after they are built?

Dr. CRONIN. I think they vary from community to community. We know of no Hill-Burton hospital that has been closed because of financial difficulties. Even during the depression years I think you will find that the hospitals did not close. In some way they kept open. The hospital like anything else has to crawl before it can walk, and walk before it can run. In many communities, a hospital is a new endeavor and in the first 6 months they have a pretty rocky time. One of the most difficult positions is that of a hospital administrator. They do not last because they cannot make ends meet in the early days of the new hospital. Communities have to learn to properly use a hospital when they have never had one before. This takes time.

Sometimes a poor program of educational information has been done in the community and what that hospital means and how much support they have to give it. Some of them will surely have trouble. Their problems are not insurmountable at the present time. With various types of insurance programs available to them they have pulled out. What will happen to them in the future? There may come a time when some of the hospitals will need help. That will come after due deliberations and discussions. Some are in trouble. Some are not. None of the Hill-Burton hospitals are closed.

Mr. DENTON. The ordinary hospital either needs some endowment or other form of outside support to meet operating expenses.

Dr. CRONIN. Approximately 81 percent of the cost of operating a hospital comes from patient fees. It cost one-third of the construction costs to operate it for any one year, 81 percent of that cost for 1 year comes from patients. The rest comes from city, county, or State funds, gifts, endowments, and from miscellaneous sources.

Dr. DENTON. In that some connection, I do not know whether it affects this problem, a great many people say that hospital costs are so high they cannot afford to take advantage of the facilities. We do have the Blue Cross and Blue Shield to help out. Has anything been done along that line so that hospital facilities can be available to more people?

Dr. CRONIN. We were before Congress on an appropriation justification under Public Law 380, an amendment to Public Law 725, in which we asked for grant money in the amount of $1,200,000 in 1949. Last year we did not get through the Budget Bureau, with those requests but that money was primarily for the sole purpose of accomplishing what you are very much interested in and what is mostly motivating your question. That is, how can these hospitals we have operate and what about the methodology in the hospital? Can it be improved to the extent that the individual can get more out of his dollar?

NEED FOR STUDIES TO ENABLE MORE EFFECTIVE UTILIZATION OF HOSPITAL SERVICE

Some studies have been made and more studies need to be made with reference to the utilization of nursing care facilities in a hospital—with reference to other better and improved methods of hospital care. This great need as authorized by Public Law 380, as an amendment to Public Law 725, was recognized by the Congress. The appropriation request was defeated by one vote in the House. So, there was a vast group of Congressmen representing the people of the country who felt this had much merit. Any program in my opinion that loses by one vote certainly has merit in it. In my opinion there is a terrific need for research studies in administration in the area of effective hospital care and more effective utilization of hospital services.

That, I think, properly is an area that the Federal Government could put money into. The money would be used as grants for studies by the universities and by hospitals which are currently providing hospital care. I think there is a great need for that type of money and I think it would be well invested. It is not in our appropriation this year but I appreciate the opportunity to speak about it because I am firmly convinced there is a great need for it.

EXPLANATION OF BUDGET ESTIMATES

Mr. FOGARTY. Doctor, you have available $82,500,000 of obligation cash for 1952?

Dr. CRONIN. That is correct.

Mr. FOGARTY. The authorization is $150,000,000?

Dr. CRONIN. Yes.

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Dr. CRONIN. For $150,000,000 and came out as $75,000,000.

Mr. FOGARTY. How much is in the budget this year for liquidation cash?

Dr. CRONIN. There is $79,700,000 for liquidation; $60,000,000 for liquidation in 1953 and $19,700,000 is to put us on a complete cash basis and eliminate the contract authority.

Mr. FOGARTY. What do you mean by "put us on a complete cash basis?"

Dr. CRONIN. Up until last year we were working on a contract authority which Congress gave us. They gave us the money on a contract authorization basis. Last year, we went over to a cash situation but to clean up the contract authority permission we are asking for $19,700,000 to put us on a completely going cash basis.

Mr. HARLOW. What he is saying is that $19,700,000 is in excess of our actual cash requirements for next year but will take care of all the contract authority that has been granted by Congress.

Mr. FOGARTY. Then that would eliminate that item from the budget next year?

Mr. HARLOW. If you give it to us this year. Yes.

Dr. CRONIN. That is so. Yes.

Mr. FOGARTY. Now, only $60,000,000 of that $79,000,000 will be used in fiscal 1953?

Dr. CRONIN. We think we will only use $60,000,000 of it.

Mr. FOGARTY. So there will be around $20,000,000 that will not be needed in 1953 because construction work may not require it? Eventually it will be needed?

Dr. CRONIN. That is right. We will not be ready to pay it out in 1953 because of incomplete contruction work. As you know, this program is not a grant program in the true sense of the word. It is a program of payment for services performed. We make our allotment to the States but we only come to the money after the services have been rendered. We pay the money to the contractor after the hospital is 25-percent built and that is why there are many months lag between us getting the money from Congress and paying it out to the contractors.

Mr. FOGARTY. You won't need that $20,000,000 in 1953?

Dr. CRONIN. We do not think we will need the $20,000,000 in 1953.

GRANTS FOR SURVEYS

Mr. FOGARTY. Do you have anything in here for grants for surveys?

Dr. CRONIN. There is nothing in the appropriation for grants for surveys.

Mr. FOGARTY. But you requested the Bureau of the Budget for such funds?

Dr. CRONIN. We requested $530,000 for surveys.

When the Federal Government started this program in 1946 as a part of the enacting Public Law 725 there were $3,000,000 in authorizations set up for the purpose of surveys in the States. That $3,000,000 was to be matched by $6,000,000 from the States. It was not all handed out to the States. It was allotted to the States on the basis of how the individual States wanted it on a matching basis.

To date we have only received from Congress out of the authorization of $3,000,000 the amount of $1,800,000. The States have been coming in each year and saying, "I have the matching money" and of that $1,800,000 we still have in the bank, approximately $400,000. We want to submit a request for rescission of the money left in the bank because "X" State may never use the money and it will stay in the bank—the Treasury of the United States. We have no authority, languagewise, to redistribute it to States in need of it. So, we thought a good way would be to get $530,000 and then rescind the money left in the bank.

In this manner we would have the authorized minimum of $10,000 for each of the 53 States. The net amount necessary to do this would be the difference between the $390,000 left and the $530,000 needed or approximately $140,000. That did not meet with the Bureau of the Budget approval and we are unable to justify that up here in this year's request.

GRANTS FOR HOSPITAL CONSTRUCTION

Mr. FOGARTY. The table on page 79 will be inserted in the record at this point and also the tables at pages 81 and 82 showing the allocation of 1951 and 1952 funds. Please also prepare a tentative breakdown for 1953.

(Statements referred to follow:)

Summary of allocations, obligations, and appropriations (all figures are cumulative)

Fiscal year	Allocations to States	Obligations incurred	Total appropriations
1948	$75,000,000	$4,009,380	$15,000,000
1949	150,000,000	90,114,528	55,000,000
1950	300,000,000	207,983,684	95,000,000
1951	385,000,000	350,654,176	205,000,000
1952 (estimated)	467,500,000	457,235,119	387,500,000
1953 (estimated)	542,500,000	532,235,119	542,200,000

Source of allocations to States

Fiscal year	Contract authority	Appropriations	Total
1948	$75,000,000	0	$75,000,000
1949	150,000,000	0	150,000,000
1950	300,000,000	0	300,000,000
1951	375,000,000	$10,000,000	385,000,000
1952	375,000,000	92,500,000	467,500,000
1953 (estimated)	375,000,000	167,500,000	542,500,000

Appropriations

Fiscal year	For liquidation	For obligation	Total
1948	$15,000,000	0	$15,000,000
1949	55,000,000	0	55,000,000
1950	95,000,000	0	95,000,000
1951	195,000,000	$10,000,000	205,000,000
1952	295,000,000	92,500,000	387,500,000
1953 (estimated)	374,700,000	167,500,000	542,200,000

Grant-in-aid allocations for hospital construction, fiscal years 1951–53

State or Territory	Allocation, 1951	Allocation, 1952	Tentative allocation, 1953 [1]
Alabama	$2,901,596	$3,014,588	$2,736,889
Arizona	481,233	483,702	439,144
Arkansas	2,131,707	1,885,430	1,711,747
California	2,905,905	2,758,014	2,503,949
Colorado	577,395	581,476	527,911
Connecticut	573,677	621,996	564,686
Delaware	200,000	200,000	[2] 200,000
District of Columbia	276,910	204,735	[2] 200,000
Florida	1,634,249	1,893,140	1,718,747
Georgia	2,962,605	3,068,889	2,786,187
Idaho	354,144	324,984	295,047
Illinois	2,666,429	2,695,593	2,447,278
Indiana	2,166,690	2,034,798	1,847,333
Iowa	1,722,468	1,346,525	1,222,483
Kansas	1,153,861	1,081,829	982,175
Kentucky	2,784,646	2,685,339	2,437,970
Louisiana	2,393,237	2,251,098	2,043,736
Maine	603,506	621,258	564,029
Maryland	894,866	1,020,721	926,694
Massachusetts	1,869,754	2,061,948	1,872,064
Michigan	2,898,469	2,662,947	2,417,629
Minnesota	1,927,214	1,674,461	1,520,215
Mississippi	2,522,946	2,404,732	2,183,211
Missouri	2,450,022	2,186,873	1,985,423
Montana	200,000	207,113	[2] 200,000
Nebraska	772,170	668,669	607,075
Nevada	200,000	200,000	[2] 200,000
New Hampshire	359,048	324,081	294,227
New Jersey	1,650,305	1,694,722	1,538,609

See footnotes at end of table.

Grant-in-aid allocations for hospital construction, fiscal years 1951–53—Continued

State or Territory	Allocation, 1951	Allocation, 1952	Tentative allocation, 1953 [1]
New Mexico	$458,671	$539,397	$489,709
New York	3,354,183	3,575,887	3,246,481
North Carolina	3,620,615	3,715,001	3,372,780
North Dakota	267,023	264,285	239,939
Ohio	3,375,308	3,292,080	2,988,818
Oklahoma	2,079,485	1,708,338	1,550,968
Oregon	871,797	577,949	524,709
Pennsylvania	5,216,416	4,711,853	4,277,803
Rhode Island	294,993	357,383	324,462
South Carolina	2,084,809	2,080,814	1,889,132
South Dakota	330,737	315,141	286,110
Tennessee	2,809,574	2,954,710	2,682,526
Texas	5,359,392	5,011,244	4,549,616
Utah	425,801	415,457	377,186
Vermont	238,039	259,609	235,695
Virginia	2,293,273	2,446,564	2,221,190
Washington	1,035,729	1,020,065	926,098
West Virginia	1,573,240	1,524,191	1,383,785
Wisconsin	1,753,227	1,703,089	1,546,202
Wyoming	200,000	200,000	[2] 200,000
Alaska	200,000	200,000	[2] 200,000
Hawaii	282,740	249,930	226,907
Puerto Rico	2,607,701	2,487,331	2,258,201
Virgin Islands	32,195	30,021	27,256
Total	85,000,000	82,500,000	75,000,000

[1] Based on: (a) Population of United States and Territories, as of Apr. 1, 1950, Bureau of the Census, (b) Allotment percentages based on 3-year average, 1947–49 per capita incomes.
[2] Minimum allotments of $200,000 as specified in title VI, Public Health Service Act, as amended.

Mr. FOGARTY. This table on page 79; can you amplify that table by putting in a breakdown of the number of projects in every State since 1948?

Dr. CRONIN. Yes.

(The information referred to follows:)

Projects in various stages at the end of each fiscal year

Fiscal year	Total projects	Projects in operation	Projects under construction	Projects in preconstruction stage
1948	347	0	44	303
1949	791	0	501	290
1950	1,368	180	781	407
1951	1,580	471	981	128
1952 (estimated)	1,800	920	770	130

DEFINITION OF HILL-BURTON HOSPITALS

Mr. FOGARTY. Now, you refer to these hospitals as Hill-Burton hospitals. What is the difference between a hospital out of the Hill-Burton fund and any other going hospital at the present time?

Dr. CRONIN. The only difference is the hospital built on the Hill-Burton fund is a hospital which the community has acquired Federal assistance, moneywise, to build. There is no hook on that community. They have no obligation to the Federal Government whatever, other than that the hospital itself must be operated for a period of 20 years by an eligible party. By that I mean if a community built a hospital with Federal funds through the Hill-Burton Act and at the end of 5 years elected to sell that hospital to a foundation as a girls' school

the Federal Government would have recourse to get the money back that they put into it through the Federal courts.

There is no Federal aspect to the operation of that hospital in any way. It is contrary to Public Law 725. The other three things the Hill-Burton Act requires are:

1. The hospital must be nonprofit.
2. The hospital must render a community service.
3. There must be no discrimination against race, creed, or color.

All the hospitals in the country are not able to meet these criteria. There may be hospitals incorporated for profit. There are hospitals which discriminate. There are hospitals who will only take certain trades—miners, railroad employees' hospitals, and so forth. Those employees in particular trades are admitted to certain hospitals where someone not working for the railroad or not working for the mine is ineligible. That type of hospital could not get assistance under the Hill-Burton Act.

PROJECT DELAYS DUE TO MATERIALS SHORTAGES

Mr. FOGARTY. You said in your statement that you have not encountered any trouble because of shortage of materials for any of these projects.

Dr. CRONIN. In any of our projects.

Mr. FOGARTY. You mean there has been no delay?

Dr. CRONIN. Yes. But it has been taken care of.

Mr. FOGARTY. How much delay has there been?

Dr. CRONIN. Not more than one quarter, or 3 months.

Mr. FOGARTY. Do you expect any delay in the projects that might be approved in 1953?

Dr. CRONIN. I do not. There may be a delay in starting the project but not afterward through shortage of materials. Under NPA any hospital-building project must first get a permit to build if it uses over 2 tons of steel. Along with the permit to build, then the controlled-materials program gives the allocations of the basic materials and steel, copper, and aluminum phased out for the construction period of the hospital. If they are given permission to build they get the allocation of material phased out for the period it takes to build the hospital. So, the only delay will be in the starting of the hospital. This, in my opinion, makes the future more promising. The fact that the steel in past months held out to go into the building of new steel mills is of such an order as to permit these steel mills to be erected and under production by about July 1953. What they put out will add to the basic production of the country and that will be sufficient to take care of the hospitals' needs.

Mr. FOGARTY. Provided we do not get into a war?

Dr. CRONIN. That is certainly true.

STATUS OF ALLOCATIONS AND ITS EFFECT ON STATE PLANNING

Mr. FOGARTY. Has the money appropriated for 1951 all been allocated?

Dr. CRONIN. It has all been allocated but not paid out. There is a lag period between the allocation and actual paying out since the paying out is done only after construction has begun. Some projects

require six to eight payments or more over 6 months' to several years' time.

Mr. FOGARTY. The projects under that allocation have all been started and are under construction?

Dr. CRONIN. No. They have not all been started. The money has been committed by the State, allotted to projects. The State has said, "We will give you money out of the 1951 allocation," and they make their application for permit to build and get phasing on materials and they can start building. But all the money is not going immediately into bricks and steel, but it is scheduled to do so. That is in the amount which has been approved for a specific project.

Mr. FOGARTY. And what about the $82,500,000 for this year?

Dr. CRONIN. As you know, that runs over 2 years. I can assure you that of that $82,500,000 the great majority has already been allotted. The reason for all that, Mr. Fogarty, is due to the fact that the program was amended on October 25, 1949, from $75,000,000 to $150,000,000 and ran for that year on the base of $150,000,000, the States programed on the basis of $150,000,000. In the middle of their program it was cut back to $75,000,000 and, as a result, the programing has already been done in the State for whatever money comes out of Congress.

Mr. FOGARTY. In my own State that is true. That is what happened to these 88 communities we talked about a year ago.

Dr. CRONIN. Yes.

Mr. FOGARTY. How many of these still are not taken care of?

Dr. CRONIN. Thirty-six; 52 from 88. Some of these communities may never get a hospital under the Hill-Burton program if the last congressional appropriation is for fiscal year 1955.

Mr. FOGARTY. They have money, the sites selected, and the plans drawn?

Dr. CRONIN. The States had planned on a $150,000,000 basis, as authorized by Public Law 380, annually until June 30, 1955, but they were cut back in 1951 and 1952 to $85,000,000 and $82,500,000, respectively. The priority position of a project in a $150,000,000 program in a State is affected when the base is reduced to less than $150,000,000. This then forced about 40 percent of the States to split their projects and take a calculated risk on Congress appropriating money in future years since the authority exists in Public Law 380 in the amount of $150,000,000 each year for 5 years.

Take the State that has to build a $4,000,000 hospital and the Federal share—the average Federal share now—is 42.7 percent. Call it 50 percent for figuring purposes. The State would provide $2,000,000 from Hill-Burton funds allotted it. The community will raise the other $2,000,000. However, the State itself may only get $800,000 in any one year. So, under this procedure they will split that project. They then cut that specific hospital's allotments down in any one year. With the full $800,000 the State wishes to build more than one project in a year. So they cut the project allotment to $400,000 this year and say, "We will give you $400,000 for each of the next 3 years and the last year we will give you the remainder." In this manner the State with a small allotment can begin several hospitals each year.

That is satisfactory with the States and they go ahead. In that State it is possible that if adequate money was not forthcoming from

Congress to meet the planning done in 1950 on the $150,000,000 basis as authorized, some project planned on could not be reached.

Mr. FOGARTY. Are there any States that have made plans through 1955?

Dr. CRONIN. I will put it this way. There is no authority. I am sure the States are planning on continuing this hospital-construction program past 1955 and their plans are based on the hope that Congress will see fit to continue the aid.

But there are no moneys being encumbered beyond June 30, 1955.

EXPLANATION OF NEED FOR LIQUIDATION CASH TO COVER PREVIOUS CONTRACTED AUTHORIZATION

Mr. SCHWABE. I am not clear about this differential of $19,700,000 that you have referred to and included in the item as liquidating cash for 1953 estimate. As I understand that is the sum you expected to carry beyond the end of the 1953 fiscal year. Is it not?

Dr. CRONIN. That is right.

Mr. SCHWABE. Why is it that you need that in view of the fact that we thought you were liquidating all obligation items during this current year, 1952 fiscal? Is it just another appeal for that additional sum or is it the idea that you did not get Congress to appropriate that last year and you have come back for it again?

Dr. CRONIN. No. We did not ask for it.

Mr. SCHWABE. You tried to get it last year?

Dr. CRONIN. No, no. That money, Mr. Schwabe, is not money for new construction.

Mr. SCHWABE. Regardless of what it is for.

Dr. CRONIN. It is money that will eventually be appropriated because under the program the applications have been made and the obligations incurred. But it takes a year or more to build a hospital. If you now appropriate all the money, for instance, to build all the approved hospitals, we would need that $19,700,000.

Mr. SCHWABE. For what?

Dr. CRONIN. To pay the bills.

Mr. SCHWABE. But why not cut your cloth to fit the pattern you have? You have only been authorized to spend whatever amount it may be.

Dr. CRONIN. This money has been authorized.

Mr. SCHWABE. Where?

Dr. CRONIN. In 1948, 1949, 1950, and 1951.

Mr. SCHWABE. Do you mean under the authorization act?

Dr. CRONIN. That is right.

Mr. SCHWABE. Well, it has not been appropriated though. Has it?

Dr. CRONIN. In 1948 and 1949 there was a contract authorization of $75,000,000 and out of that the obligation was incurred by the Federal Government.

Mr. SCHWABE. To what extent?

Dr. CRONIN. To the tune of the whole $75,000,000.

Mr. SCHWABE. But you did not overreach and extend that $19,700,000 more?

Dr. CRONIN. We only had an authorization.

Mr. SCHWABE. I know. But that is the general authorizing act not under an appropriation act.

Dr. CRONIN. Under the appropriation act.

Mr. SCHWABE. Where?

Dr. CRONIN. 1948–49–50–51.

Mr. SCHWABE. Then we were mistaken when we thought we were appropriating enough to clean up all the authorized, obligated moneys?

Dr. CRONIN. No.

Mr. SCHWABE. We got you on a cash basis last year?

Dr. CRONIN. We did not ask to go on a complete cash basis last year.

Mr. SCHWABE. Congress saw fit to try to put you on a cash basis.

Dr. CRONIN. To do that we would have required this $19,700,000.

Mr. SCHWABE. Was that brought to the attention of Congress and this committee.

Dr. CRONIN. As far as I know, it was.

Mr. SCHWABE. I do not recall in clarity any such presentation.

Dr. CRONIN. I am sure it was.

Mr. SCHWABE. As I remember you asked for $120,000,000 for liquidating cash and we reduced it to $20,000,000.

Dr. CRONIN. We asked for it but Congress did not appropriate it.

Mr. SCHWABE. We reduced it $20,000,000.

Dr. CRONIN. That is that $20,000,000.

Mr. SCHWABE. Under the old system we contracted for these sums to be paid. It was later an appropriation?

Dr. CRONIN. It was appropriation language.

Mr. SCHWABE. 1948–49 and 1950.

Dr. CRONIN. It does not raise the total amount of money over $75,000,000 that went into the program. It is a question of paying for it.

Mr. SCHWABE. If I go to a store and say I want to pay my entire bill, or if you did, you don't want to be coming back later and have the grocer say, "Here is a hangnail we didn't tell you about," or "You didn't pay it all when you paid what you thought was the entire obligation." So, you were on a cash basis from here on out. It does seem to me that this is not quite the way this matter should be presented. I have been misled about it.

Dr. CRONIN. I certainly agree with you about going to the storekeeper and telling him you want to pay it up. But that is not what we did. We asked for $120,000,000 to help us be put on a cash basis.

Mr. SCHWABE. But you did not get it.

Dr. CRONIN. But the $120,000,000 had already been obligated by the Federal Government and the Government is obligated to pay it.

Mr. SCHWABE. That is your construction. But I think Congress can say, "We are only going to pay $100,000,000 to wipe out obligated funds." That certainly was what Congress said. Wasn't it?

Dr. CRONIN. You can't wipe out $120,000,000 with $100,000,000.

Mr. SCHWABE. But sometimes agencies of Government try to tell Congress what to do so we will create these obligations and we will continue them when they could stop.

Dr. CRONIN. I can assure you, sir, that that as the Administrator of the program it was not my intention nor my action. There are two kinds of authorizations.

Mr. BUSBEY. But that does not mean anything if there is no appropriation.

Mr. STEPHENS. From 1948 to 1951 the House said in response to budget estimates, "Here is X amount in contract authority for obligation and here is X dollars in cash to pay for previous obligations." It is shown on page 79. From 1948 to 1951 we had contract authority ranging from $75,000,000 to $150,000,000. The committee said, "In 1949 you can have $115,000,000. We will give you $40,000,000 in cash for previous obligations and you can make new bills for $75,000,000." In 1950 it did the same. In 1951 these bills were presented because the committee gave us contract authority four straight years. This $19,700,000 is to be honored and paid because Congress authorized us to incur these obligations.

It takes $79,700,000 to wipe this out, and this committee and Congress authorized us to incur it.

Mr. SCHWABE. I have not been shown that they have been incurred. I would like to be shown they were incurred before the matter was presented to this committee and to Congress a year ago. What do you say about that?

Mr. STEPHENS. What I have to say is that in our opinion, on the basis of the act appropriating the money and the language used——

Mr. SCHWABE. But why do you keep on ad infinitum?

Up until a year ago, where can you show that they were actually obligated to this $19,700,000 we are talking about. I wish you would get the facts on that so it will be clear not only to me but I think Congress will want to know about it and should know about it.

Mr. HILSENROTH. May I speak to that?

Mr. SCHWABE. Anybody.

Mr. HILSENROTH. I think, if you refer to the tables at page 79, we show the source of allocation to the States.

Mr. SCHWABE. But not all of these have been taken up now.

Mr. HILSENROTH. Well, I just will carry on. For example, the Congress through appropriation action gave us $75,000,000 for 1948. That fund remained available for obligation over a 2-year period.

At the end of that 2-year period we obligated on projects all but approximately $84,000 of that money. For the next year we were given an additional $75,000,000. We obligated, during the 2-year period it was available, all but $14,000 of that money.

Mr. BUSBEY. That was what year?

Mr. SCHWABE. That was contract authority?

Mr. HILSENROTH. Yes.

Mr. SCHWABE. And, appropriationwise, it was only $40,000,000.

Mr. HILSENROTH. Correct. For 1950 we were given $150,000,000 in contract authority, and we obligated all but $57,000 of that money.

Mr. SCHWABE. All but $57,000?

Mr. HILSENROTH. That is right. That $57,000 represented the allotment to the Virgin Islands which they were not able to match.

Mr. SCHWABE. And only $40,000,000 was actually appropriated.

Mr. HILSENROTH. Yes. In 1951 we were given $75,000,000 in contract authority. Therefore, we have a total in contract authority of $375,000,000. To pay off our obligations under this contract authority we have to date been appropriated $295,000,000. Now, we estimate that we will not obligate or have not obligated $300,000 of the $375,000,000. Therefore, we need to have appropriated in order to clean up this appropriated authorization the difference between $374,700,000 and $295,000,000 previously appropriated.

Actually, therefore, at this session of Congress, if Congress brings an appropriation of $79,700,000, it will completely wipe out the contract authority and obligation for the years 1948, 1949, 1950, and 1951.

Now, what we are asking is that, frankly, we do not think we need the full $79,700,000 for 1953. We will only spend $60,000,000 of it and will carry over until 1954 the remaining $19,700,000. That is the way we presented it to the Bureau of the Budget.

Mr. SCHWABE. And the way you presented it here this morning.

Mr. HILSENROTH. That request is to pay off obligations that we incurred under this contract authority before Congress decided to put us on a cash basis; it takes a several-year period to completely put us on a cash basis. Last year, in our tables, we indicated that we needed $120,000,000 for the current fiscal year; Congress cut it down to $100,000,000 and thought there would be a carry-over for 1953 and 1954. That is the way we presented it in our appropriation estimate, and we know now we will have to carry over into 1954. Our best estimate is $19,700,000 as the 1954 carry-over.

Mr. SCHWABE. I can understand your line of reasoning and I think you have made a clear presentation of it. But I know I understood—and Congress generally understood—they were wiping out all this contract liability and putting you on a cash basis commencing with last year. This situation will be a shock to them, in my opinion. It will be hard to explain, and you now say that your best judgment is that you will not end it during fiscal 1953. But it is going to be very difficult to get it appropriated. I think you have an additional burden cast upon yourself and so have we in attempting to get it through.

I think, young man, your presentation is the clearest by far that I have heard, but I do not believe you have answered my question. That was to show us where this was obligated before 1 year ago—prior to a year ago when you came in and asked for $120,000,000. Maybe it can be answered. I am not saying it cannot be.

Mr. HARLOW. I think it can, sir. But may I digress a little from your immediate point? I have before me the presentation that we made last year which showed that we had a total of $375,000,000 in contract authority which had been granted and that our estimated obligations——

Mr. SCHWABE. Pardon me. The $375,000,000 contract authority appropriationwise?

Mr. HARLOW. Yes, sir; in the appropriation act itself.

Mr. SCHWABE. And not trying to cover that under the general authorization act?

Mr. HARLOW. That is correct, sir; and that way we showed estimated obligations of $374,865,000.

Mr. HARLOW. At that time we were asking $120,000,000 to liquidate contract authorities for fiscal 1952.

LIQUIDATION CASH APPROPRIATED

Mr. SCHWABE. How much had already been appropriated? The whole?

Mr. HILSENROTH. $195,000,000.

Mr. SCHWABE. I think that figure should be inserted here.

Mr. HILSENROTH. $195,000,000 had thus far been appropriated, and we were requesting $120,000,000 additional for fiscal 1952 to liquidate this contract authority, which would have given us $315,000,000 to liquidate, leaving a carry-over of the difference between $315,000,000 and last year's estimated obligation of $374,850,000, which this year is reduced to $374,700,000. That is our total obligation under the contract authority.

Mr. HARLOW. That $120,000,000 we requested last year would have been short of completing the payments for the contract authority, by the amount in this budget this year, by $59,700,000. You failed to appropriate $20,000,000 of the amount we requested; so, the amount we are short this year of completing all appropriations by contract authority is the $79,700,000.

I think your thinking along that line is perhaps caused by the statement we made last year—or, at least, I am sure we made it along this line—that we were getting away from contract authority and we were not asking for any more contract authority. We were asking that, beginning with fiscal 1952, all of our money be appropriated rather than being done by contract authority, and from that I am sure you perhaps got the idea——

Mr. SCHWABE. That we appropriated enough money to liquidate all outstanding contract authority or obligations and whatever cash was necessary and legitimate to carry that, and we would not have any more of these hangnails coming up, or further obligations outstanding to take care of such as we are faced with here. I know, definitely, it was my understanding and that of a lot of Members in Congress.

Mr. HARLOW. I am sorry if we left that impression.

Mr. SCHWABE. I am not criticizing except to the extent that I want this clarified, and I want to understand it myself first, and then, if I can understand it, explain it to other Members. I yet do not believe that anybody has answered my question as to whether the total of the obligations presented last year to us will show obligated funds delinquent to the extent you have said and which we did not appropriate enough money to liquidate. That may have been explained last year. I have not reviewed our hearings of last year, but I still do not know where these figures jibe.

Then I want to know if you did not go ahead and create some new obligations that would make this situation you told us about a year ago about unblocked items.

Mr. HILSENROTH. On that sir, you see the funds available under the contract authority are given to us or had been given to us over a 2-year period. That is how you arrived at the $375,000,000 representing 1948, 1949, 1950, and 1951 appropriations following during the normal procedure. Actually, we have found that the States and the project sponsors are utilizing virtually every penny of that $375,000,000. We said last year that it would be reduced to only $374,850,000.

Mr. SCHWABE. Twenty-six of these projects have not utilized any so far, if they happen to be included.

Mr. HILSENROTH. They have not been included. They were not approved under the appropriation program. They are projects that the State was not able to approve. The States had to say, "You have

to wait until some time in the future, because the program has been cut back from $150,000,000 to $75,000,000." They are eliminated from the present discussion.

Mr. SCHWABE. All right.

Mr. HILSENROTH. During the course of the last 12 months we have only been able to whittle down that obligation figure by $150,000. In other words, while we estimated the obligations last year in the amount of $374,850,000, the obligations estimated at the present time are $374,700,000. We are talking only about contract authority. We are not talking about obligations against the cash appropriation.

That money was and has been obligated. Admittedly, some of that money was obligated since we were last here. It had to be, because the 1951 contract authority does not expire until June 30, 1952. We are still working on a small part of that money. Most of it, the great percentage of it, has been obligated. The balance of it was promised under preliminary obligations to these project sponsors. Some of that money still has not been obligated but will be. We will lose very little money of that, sir, when we come to June 30, 1952.

Mr. SCHWABE. Now, when you knew Congress—and I will assume this was the attitude of Congress—wanted you to cut down on this contract obligation everywhere, you came to the point where only $100,000,000 of the $120,000,000 would be taken care of. Don't you believe it would have been proper, from the administrative standpoint, to have attempted to have done so?

Mr. HILSENROTH. But these funds had been allocated to the States.

Mr. SCHWABE. They were hanging up there, but when you found what was the attitude of Congress, why not try to get in line with it?

Mr. HARLOW. We interpreted the action not in the way you suggest, but that we should go ahead with this program to the full extent possible. As a matter of fact, the Congress increased the budget in this item in 1952. We had requested $75,000,000, and you people increased it.

Mr. SCHWABE. But we were getting onto a cash basis, if I understood Congress.

Mr. HARLOW. I will have to differ with you, Mr. Schwabe, on your interpretation of what Congress was intending.

Mr. SCHWABE. You have that privilege and without any offense, I assure you.

Mr. HARLOW. Yes, sir.

Mr. SCHWABE. I believe that you should have come back to this committee and found out what our intentions were and what our wishes were and our ideas and how we interpreted the attitude of Congress.

Mr. HARLOW. We thought, if Congress had intended that we should not exercise the full range of our contract authority, that they would have rescinded the contract authority rather than appropriating less money to liquidate contract authority.

Mr. SCHWABE. Well, I am looking at it from the standpoint of what I think Congress will do.

Mr. FOGARTY. I can see where we could all get confused.

Mr. SCHWABE. Absolutely.

Mr. FOGARTY. We made a change last year to get away from authorizing future obligations without appropriating the funds. Part of the reason for that is that we should not bind a future Congress to appropriate for something we have done. But we did not always

operate under the Hill-Burton Act that way. In fact, we gave contract authority of $75,000,000 in 1951 and considerably more prior to that. In granting that contract authority we obligated ourselves to make that payment and are responsible for it.

But I have been reading over the hearings again and I do not think it was made clear a year ago. On the basis of allocation of funds to various States over a 2- or 3-year period, some States have divided these projects up over 2 or 3 years. The discussion almost got to that point at one time, but it was never brought out. I think Dr. Cronin started to get into it by saying:

> Some of the smaller States are building the larger hospitals by using the split-project type of procedure. In other words, they will allocate a certain amount of money out of State allotment for 1 year and then allot another amount of money for the same project in the forthcoming year, and some of the split projects go over 3 years, particularly when there are large hospitals to be built. The split-project technique is a technique which has permitted the building of some of the larger hospitals in some of the smaller States.

Mr. SCHWABE. But that would not change the situation appropriationwise, federally?

Dr. CRONIN. No; it should not.

Mr. SCHWABE. It only changes it appropriationwise for the States.

Dr. CRONIN. That is right, except that——

Mr. SCHWABE. Your funds here appropriated would be held until expended for these particular projects; would they not?

Dr. CRONIN. That is correct, with this exception again: that, in carrying forth the completion of a project which is working on several years' appropriation at any one time, those moneys for each part of the project are obligated only out of moneys which the Federal Government has in the bank, so to speak. The parts of the project for the years to come are always provisional that the Congress appropriate money for that year.

Mr. SCHWABE. It has to be based on that assumption.

Dr. CRONIN. That is right.

Mr. FOGARTY. It was not completely brought out in last year's hearings and I can see, in view of the way we were working in 1948 to 1951 and the new technique of splitting these projects for 3 years, that there could easily be misunderstandings.

Dr. CRONIN. Last year, the proposition was made that we cut from the contract authority to the pay-as-you-go basis. In building our testimony it was based on the fact that that was obligating the future and we would no longer be asking for contract authority but giving us a policy of a cash-as-you-go basis. Last year, when the additional $10,000,000 was appropriated in 1951 we had $75,000,000 in contract authority. When, in the second session of the Eighty-first Congress, the additional $10,000 was given, it was in cash. That was quite complicated. Here $75,000,000 was contract authority and $10,000,000 on a cash basis.

When we came in last year and asked for the money to be on a cash basis and my testimony was all directed to the fact that in the future we would not be asking for any more contract authority, everything would be cash, it did not take into consideration this money left over that we had obligated from previous years.

Mr. SCHWABE. Following you right there. That which was left and had not been used under contract authority for previous years

together with any sum that might have elapsed or any item that might not have been taken up beneficially, you did not hesitate to go ahead and reobligate or obligate for pending projects or new applications up to the limit of the contract authorization? Is that correct?

Dr. CRONIN. No, Mr. Schwabe.

I would like to take up first the money that was not used. As you know, each contract authority appropriation runs over the 2-year period. The money that was not used in 1948 we lost—$85,000 of $75,000,000—that reverted to the Treasury. In 1949 we lost $14,000 of $75,000,000. That money reverted to the Treasury on June 30, 1951. It was committed July 1, 1949.

Mr. SCHWABE. And not obligated?

Dr. CRONIN. Not used at all.

Mr. SCHWABE. And not obligated?

AMOUNTS RETURNED TO TREASURY

Dr. CRONIN. In 1950, out of $150,000,000 we lost the Virgin Islands allocation of $57,034. So there was a total out of $350,000,000 which had been appropriated, $156,000 of which was returned completely to the Treasury of the United States and was not used in any other way.

In 1951, out of the $85,000,000 there was only about $18,000 left at the time of our presentation to the Bureau of the Budget. And in 1952, out of $85,000,000 there was only $82,500. So out of the total of $67,500,000 we only had remaining $60,500,000 with which to obligate projects. The rest of it which lapsed was returned to the Treasury.

Mr. SCHWABE. I understand that, but nobody has convinced me as yet, and I do not want to be contentious. You ought not to have gone ahead and obligated or reobligated funds, a part of this $19,700,000 that we did not appropriate for you last year, on projects since you appeared here last year. That is the question I have been trying to settle. Someone should know the answer definitely.

Mr. HILSENROTH. May I try to answer that with an explanation of the appropriation. The funds you are interested in are the $75,000,00 of 1951 contract authority. That $75,00,000 became available, let me say, in July of 1950, that is for fiscal year 1951. When we got the appropriation from Congress we immediately advised the States of their allotment for that given fiscal year.

Mr. SCHWABE. That is routine.

Mr. HILSENROTH. The allotment is made to the States.

Mr. SCHWABE. That is routine.

Mr. HILSENROTH. That is correct.

Therefore, every dollar of the $75,000,000 in contract authority was allotted to the States and had been reallotted by the States. The States, in turn, make their commitments to the project sponsors. A year ago, when we were before this committee every dollar under contract authority had been allotted to the States, virtually all of it had been promised to project sponsors and the great percentage had been actually obligated.

Mr. SCHWABE. This promising is different from obligating.

Mr. HILSENROTH. It had been customary under this contract authority technique for the Public Health Service and for the State agencies administering the program to regard the contract authority

as virtually money in the bank. That is, a commitment on the part of Congress that they would appropriate and, therefore, the States had no reason, in my opinion, to believe, nor did we, that when Congress wanted to go on a cash basis that we would go back and reinterpret the existing contract authority made many months before.

Mr. SCHWABE. I understand the argument but that does not answer my question. That is the crux of the whole argument, that we do not agree on the interpretation. Mr. Harlow took the opportunity to say he did not agree with me. You do not agree with me. There are no hard feelings. But aside from that, I have asked you directly if you didn't go ahead and obligate, or reobligate, some of these funds that we didn't let you have the money for on a cash basis last year. That is during the period that has intervened since you were here trying to justify your request for appropriations last year.

Mr. Chairman, I hope I am not consuming too much of the committee's time.

Mr. FOGARTY. I want this thing cleared up, too.

Mr. SCHWABE. I want the facts brought out here.

Mr. BUSBEY. Take all the time you want.

Mr. SCHWABE. I am not getting answers to all my question. I understand your answers but they do not show the facts I seek.

Dr. CRONIN. You would have to change the State allotment if that was done and it would take legislative action.

Mr. SCHWABE. You would not tell me there has been no change in any of these obligations?

Dr. CRONIN. In the State allotment there has been no change. We would have to change the other element of that procedure if we had interpreted as you do. We did not interpret Congress the way you did and it was not done wilfully.

Mr. SCHWABE. I am not even accusing you of that.

Mr. HARLOW. There is involved a matter of interpreting when an obligation is created.

INTERPRETATION OF OBLIGATION INCURRED

Mr. SCHWABE. And I want to see how they interpret it.

Mr. HARLOW. There are four points at any one of which you could say an obligation had been incurred. If you say, when the money has been allotted to the States the Federal Government has incurred an obligation to the States, we can show you very definitely that in that sense the money was obligated prior to the time that we were here.

Mr. SCHWABE. Perhaps there will be no dispute about that.

Mr. HARLOW. On the other hand, a project goes through several stages of approval and the final stage is when the contract is let. It that right, Doctor?

Dr. CRONIN. That is right.

Mr. HILSENROTH. And we have not been putting the money on the books as obligated in the real sense of the word until the contract has been let.

Mr. SCHWABE. That is the way I have understood it and I think I was instrumental in getting the first hospital completed under the program and I have been for the program but I do want it rationalized.

Mr. HARLOW. Let me give you some figures. I do not know, when we were before Congress but as of June 30th 1951, the total amount of

money for contracts which had been let was $350,000,000. You can apply that against the $375,000,000 contract authority that we had up to that time and say there was $25,000,000 of contract authority for which actual contracts had not been awarded to contractors.

That is in substantiation of your belief or desire to know whether we had actually obligated this money prior to the time we appeared before you. In that sense, we had not. But in another sense we had because we had allotted the money to the States and the States had submitted for the most part preliminary projects for money and Congress had said, We are going to give you that $375,000,000 and the States had planned to use it.

We told them it was available.

Congress took no action on that $375,000,000 we allotted on that basis and as of the end of December 1951 the total amount on contract obligation which were firm obligations was $390,000,000. So, we had passed the total contract authority of $375,000,000 and were well into our cash obligations on actual contracts.

Mr. SCHWABE. Mr. Harlow, I think your explanation has gone further than anybody else's up to this point and I appreciate it but it, of course, does revolve around what might be considered obligation of funds. I am not going to even argue that at this time. But you premised your remarks on a similar statement. You gave us the figure as of June 30, the end of the fiscal year. You were here prior to that time.

Mr. HARLOW. I think it was in February.

Mr. FOGARTY. February 26.

Mr. SCHWABE. Yes. About a year ago. So your answer, as you said, would not exactly answer my question to that extent. As to the State allocation, of course, I know that the doctor here will attempt, and you will attempt, and everybody here will attempt to say that it is at least conceivable—I suppose it happens many times—that a State did not qualify for all of its allotment or allocation.

Dr. CRONIN. I do not quite understand what you mean by "qualify."

Mr. SCHWABE. They did not show sponsorship for all the monies that had been allocated to them.

Dr. CRONIN. At the beginning of each year the State must submit to us a project sketch.

Mr. SCHWABE. Yes. But they do not go all the way through.

Dr. CRONIN. Some of the States have gone clear out to June 30, 1952.

Mr. SCHWABE. But they have not all gone through in every instance?

Dr. CRONIN. I would say most of them have.

Mr. SCHWABE. Are you sure?

Dr. CRONIN. I would have to check that.

Mr. SCHWABE. I think you should check quite seriously and I think I know of a few that have not. There is nothing wrong about it. They did not come up to your requirements.

Dr. CRONIN. I do not think that has anything to do with it—the reason they would not.

Mr. SCHWABE. You do not?

Dr. CRONIN. Or because they had not made all their plans.

Mr. SCHWABE. You would not go through with payment until assured of their compliance?

Dr. CRONIN. We do not put it out on a State basis but on a project basis and we pay when 25 percent complete.

Mr. SCHWABE. Assume with me a minute that the project was not 25 percent completed. You would not pay on it?

Dr. CRONIN. No.

Mr. SCHWABE. That is one instance of where they might not use the funds allocated?

Dr. CRONIN. I don't know of any project we have had that way.

Mr. SCHWABE. You are the administrator. I am trying to find out if there are.

Dr. CRONIN. Hypothetically, I will grant you there might be.

Mr. SCHWABE. You can find out if there are any?

Dr. CRONIN. We can and we could put it in the record.

Mr. SCHWABE. Hypothetically, there might be other reasons for not paying. Might there not? I happen to know in the first one completed there was a reason why you were not going to after they raised the money. You waived part of your regulations and requirements and properly so. Now, if you had not seen fit to waive them through your legal department, as was done, I assume it never would have been paid out. That is hypothetically clearly imaginable.

Dr. CRONIN. That is right.

Mr. SCHWABE. I do not know how many of these cases there might have been and I am only asking if there were not some.

Dr. CRONIN. In that hypothetical case they might take that money which was reverting back and that project under consideration would not get it.

Mr. SCHWABE. And another project in the same State might if they were qualified for it.

Dr. CRONIN. Within the 2-year period.

Mr. SCHWABE. That is right. But if they did not and no other project came in for that money in the same State within the 2-year period——

Dr. CRONIN. The money is lost. It goes back to the Treasury of the United States.

Mr. SCHWABE. It is not obligated.

Dr. CRONIN. No.

Mr. SCHWABE. And you would not reobligate it?

Dr. CRONIN. We cannot. It is illegal.

Mr. SCHWABE. I agree with you, but I am still trying to get the answer to my basic question. If some other project in the same State had qualified for a lesser amount then it would only qualify and get that lesser amount.

Dr. CRONIN. That is correct.

Mr. SCHWABE. So there might be a lapse of funds that had previously been obligated for a period. Might there not have been?

Dr. CRONIN. That is correct.

Mr. SCHWABE. That is all I have been trying to find out.

Dr. CRONIN. I can assure you that the respective State administrators in administering this program do everything they can to obligate that money. They know they do not want to lose it and that is what happens.

Mr. SCHWABE. They do not want to lose it.

Mr. FOGARTY. Mr. Schwabe?

Mr. SCHWABE. Thank you.

PROBLEM OF HOSPITAL SERVICE FOR SMALL COMMUNITIES

Dr. Cronin, there are several more questions I would like to propound to you, if I may, please, at this time.

You used an expression, as I understood you to say, "The core of our country is in communities of less than 10,000 population." Would you mind telling us just what you meant by that so that I may be enlightened?

Dr. CRONIN. What I meant by that, Mr. Schwabe, was that of the total numbers of population that make up our country, if the communities of 10,000 population, or approximating that number, were all added together, it is my opinion that you would find most of the people in the country would be represented by that population group.

Mr. SCHWABE. It may be true. I thought that is what you meant and I haven't checked it and don't know anything about that, of course, when you get down to the smaller centers, there is where we experience the greatest deficiency in medical service, hospitalization, and with reference to number of doctors, attending physicians and nurses; is that not correct?

Dr. CRONIN. That is correct.

Mr. SCHWABE. Cities of 10,000 population and up generally are not underserviced like the smaller towns and the rural communities; is that not correct?

Dr. CRONIN. I would prefer to state that they probably are serviced to a greater extent than the less urban areas.

Mr. SCHWABE. You mean a city of 10,000 and up is serviced to a less extent?

Dr. CRONIN. No, they are serviced to a greater extent than the less urban areas.

REASONS FOR INADEQUATE DISTRIBUTION OF PHYSICIANS

Mr. SCHWABE. That is the way I put my question. That is the way I thought it was.

After all, the problem of getting the doctors, the younger doctors in general practice back into these smaller communities and rural areas has not been very satisfactorily solved as yet, has it?

Dr. CRONIN. I don't think it has been completely solved at all, but I do think this particular program, the Hill-Burton program, is helping to solve that deficiency.

Mr. SCHWABE. Insofar as hospital facilities are afforded with nurses at the elbow of the doctor, and with the mechanical equipment and whatever else he may need, if that is made available to him, of course that helps in the solution. Is that what you really mean?

Dr. CRONIN. That and the fact that the younger doctor in considering a place to locate his practice and spend his life is much more apt because of his training to go to a community that has a facility in it where he can practice the kind of medicine he was trained to practice.

Mr. SCHWABE. Of course, when you said the kind of medicine he is trained to practice, that assumes, generally speaking, an early specialization to some extent, does it not?

Dr. CRONIN. Not necessarily.

Mr. SCHWABE. Well, if it doesn't mean that, what do you mean by the kind of medicine he was trained to practice?

Dr. CRONIN. By that I mean that medical education today, because of the progress of science in general, as it makes contribution to the practice of medicine, has contributed certain instruments of precision, such as the electrocardiograph, X-ray, electroencephalograph, et cetera, and laboratory procedures with their technical apparatus necessary to carry procedures. These young doctors have been trained in their educational program to utilize these facilities to arrive at as accurate a diagnosis and as accurate as possible a therapy directed at the patient's ills, and you will not find most of those apparata in the individual doctor's offices because of the costs of them, and we do find them in hospitals.

Mr. SCHWABE. That has always been true in principle, hasn't it?

Dr. CRONIN. I think it is true today because of our great advances in what one might call the technical field of sciences.

Mr. SCHWABE. I say the principle has always been true?

Dr. CRONIN. To some extent, but not to the extent it is today.

Mr. SCHWABE. I am not arguing with you about the extent, but the principle that a doctor in the larger centers always had additional advantages of the use and training in the use of equipment, so far as it had been developed in his time. Is that not correct?

Dr. CRONIN. I think that is correct.

Mr. SCHWABE. In the smaller or rural communities he was deprived of that very largely and sometimes almost completely?

Dr. CRONIN. That is correct.

Mr. SCHWABE. And yet we had what we called good general practitioners, country doctors, throughout the country until within the last 20 or 25 years, generally speaking, didn't we?

Dr. CRONIN. I think that is correct.

Mr. SCHWABE. And today we have a dearth of them, almost none of them left in the rural communities, and a very few, an insufficient number, in the small urban communities; is that not correct?

Dr. CRONIN. I would say the over-all distribution of the medical men in the country is not adequate.

Mr. SCHWABE. I know, but you are begging the question. I am talking about these sparsely-settled centers. There is where we feel the greatest dearth, is it not?

Dr. CRONIN. That is correct.

Mr. SCHWABE. And need for additional medical care of the people? Is that correct?

Dr. CRONIN. That is correct.

Mr. SCHWABE. And if you do not have a hospital, whether it is a Hill-Burton Hospital or some other hospital in the community, that situation seems to be more accentuated?

Dr. CRONIN. I think that is correct.

Mr. SCHWABE. Now, so far as hospital operations are concerned, unfortunately or fortunately, it never has been considered a very inviting enterprise from the standpoint of profit-making; is that correct?

Dr. CRONIN. I would say that is correct.

Mr. SCHWABE. And the physicians have established hospitals for themselves and have done fairly well here and there but, by and large,

they are successful as an adjunct to their efficiency and that of the other doctors in the community rather than as a profit-making program for them?

Dr. CRONIN. I think the satisfaction of the physician and the people in the health field get is not tangible in terms of dollars in return. A lot of their satisfaction is on service to mankind, which is part of their reason for becoming physicians.

Mr. SCHWABE. It should be, perhaps, their chief reason, don't you agree with me?

Dr. CRONIN. I think it would be ideal if every man that practiced medicine were not in need of the dollar.

Mr. SCHWABE. You are not in favor of socialized medicine, are you?

Dr. CRONIN. Mr. Schwabe, I would, first of all, like to state that socialized medicine to me is something that has been the victim of perhaps—and I don't say whether it is good or bad being the victim—of confused definition. Before I would want to discuss what is socialized medicine, I would want to know what the definition of socialized medicine that the people I discussed it with is, so that I properly could agree that we had the common base to jump from in our discussion.

Mr. SCHWABE. But I understand you are not saying that you think an ideal situation would be where a doctor wouldn't have to depend upon fees from individual patients?

Dr. CRONIN. No, sir. I did not say that.

Mr. SCHWABE. I am asking you, you don't want to be understood as saying that?

Dr. CRONIN. No, sir.

Mr. SCHWABE. Where he would depend upon Government at some level furnishing his salary, stipend, or living, whatever you may term it?

Dr. CRONIN. No, sir; I did not make any kind of statement as that kind, nor would I. My implication is I think it would be ideal and I know it isn't practical if every physician in the country, regardless of where the money came from, could practice medicine without any regard for his own bread and butter, that he was assured that his bread and butter and his needs of his family and himself would be taken care of some place. Now, where that source would be, I did not discuss.

Mr. SCHWABE. And that might be ideal for men in any profession, vocation, or walk of life; is that correct?

Dr. CRONIN. I think that would be a very idealistic state and particularly adaptable to public service.

Mr. SCHWABE. So you don't plan on us seeing that this side of millenium, I hope?

Dr. CRONIN. That is correct.

NUMBER OF BEDS PROVIDED BY HILL-BURTON HOSPITALS

Mr. SCHWABE. With reference to these hospitals, whether they be Hill-Burton or otherwise, and a lot of them throughout the country are not Hill-Burton, are they?

Dr. CRONIN. That is right.

Mr. SCHWABE. Do you know what proportion are?

Dr. CRONIN. Approximately 40 percent of all the hospital construction in the United States at the present time——

Mr. SCHWABE. You mean construction or operation now?

Dr. CRONIN. Construction, not operation, because Hill-Burton has no money for operation.

Mr. SCHWABE. Maybe you are not going to answer just what I had in mind. Excuse me. What I am getting at is percentagewise, how many of our total hospital beds are in hospitals that have been built as Hill-Burton hospitals?

Dr. CRONIN. Approximately 81,000.

Mr. SCHWABE. That isn't percentagewise. I don't remember just how many there are in total. Did you say it is 1,010,000?

Dr. CRONIN. 1,010,000 are the number of acceptable beds, but about 1,300,000 are the total beds acceptable and nonacceptable in the country today.

Mr. SCHWABE. And out of that total about how many are Hill-Burton?

Dr. CRONIN. 81,000 beds have been the end result of the approval of these 1,700 projects.

Mr. SCHWABE. That is what I am trying to get at.

Dr. CRONIN. That is right.

EFFECT OF HOSPITAL INSURANCE PROGRAMS ON PATIENT CONFINEMENT

Mr. SCHWABE. Under the insurance programs of one kind or another—and we have many of them, of course—the public has come to depend upon hospitalization much more generally and frequently and for longer intervals of hospitalization than ever before; is that not correct?

Dr. CRONIN. I think that is correct. I don't think it is entirely due to the insurance program. I think it is due to the methodology of the practice of medicine and requirements of that practice today rather than just the insurance schemes which are doing a grand job in defraying the cost; they can't do it all and no scheme that I know of yet has been able to do it all.

Mr. SCHWABE. Don't you get reactions, as I have in many instances throughout the country, and I have visited many hospitals, Hill-Burton and otherwise, that the patients say, "Well, what is the use of going home now? I don't have to go now, do I Doctor?" Or, "This is paid for for another 2 days or a week," and don't you find and get reactions that the people are tending to stay in hospitals longer than they would if they didn't have this insurance or something else to pay their way?

Dr. CRONIN. I think there are several factors that are determining the length of stay of a patient in a hospital. One, again, is the early ambulatory care, which is a development of modern medicine, which was not true 15 years ago, particularly on the surgical side.

I was a surgeon and I kept my patients in bed on an appendectomy 10 days. If I was doing surgery today, 3 to 4 days is the usual thing, and it has worked out to the advantage of the patient.

I doubt very much if there is sufficient evidence to make an accurate generalization that because of insurance of any kind, in relation to hospitals, that the patients are being either permitted to stay in the hospital longer than they need to, or that they as individuals have

been able to inveigle their doctors and hospital administrators to do so, and I predicate that statement that we are short 870,000 hospital beds and we need those beds every day for use of the people who are sick.

Mr. SCHWABE. I have heard your statement about our needing them, and that there are so many needed, et cetera, but as I go over the country, I find a lot of vacancies. Of course, there must be a certain reservoir there, or else we can't take care of emergency cases. I appreciate all that.

ESTIMATED PERCENTAGE OF HOSPITAL BED OCCUPANCY

Dr. CRONIN. I think the average vacancy, or the average occupancy rate of the hospitals of the country today, it varies in place to place, but in general, in my opinion, it is around 75 to 78 percent occupancy, and that is not a very high margin of safety.

Mr. SCHWABE. I have found that is about right.

Dr. CRONIN. I think that is about right.

INFORMATION FURNISHED EXCLUDES FEDERAL HOSPITALS

Mr. SCHWABE. But does what you have been telling us about hospitals generally include the Indian hospitals, for instance?

Dr. CRONIN. I have never been assigned to the Indian Service, Mr. Schwabe, and I don't know.

Mr. SCHWABE. I am talking about so far as your figures here on hospital beds, et cetera, does that include the hospitals of the Indian Service?

Dr. CRONIN. It would not be included in my figures. That is a separate situation.

Mr. SCHWABE. Well, of course, there are a lot of them.

Dr. CRONIN. Oh, yes.

Mr. SCHWABE. Does it include all of the charitable hospitals?

Dr. CRONIN. It includes all hospitals with the exception of the Army and Navy, Public Health Service, Veterans, and Indian Service hospitals; the Federal hospitals. It does not include Federal hospitals.

Mr. SCHWABE. Does it include all State hospitals?

Dr. CRONIN. It would include the State hospitals.

Mr. SCHWABE. And municipal, county, and city, et cetera?

Dr. CRONIN. Yes. I might, for your information, tell you that roughly 50 percent of these Hill-Burton hospitals, the hospitals aided by the Hill-Burton money, are governmental hospitals in terms of city, State, municipal, local, et cetera, whereas about 50 percent are the private nonprofit hospitals.

Mr. SCHWABE. Such as church hospitals, charitables, et cetera?

Dr. CRONIN. That is right.

Mr. SCHWABE. May I ask you a further question, do your figures include State hospitals for the insane, the epileptics and the mentally deficient in various forms?

Dr. CRONIN. No. My figures are basically the general hospital, without the specialty hospital such as you're describing.

HOSPITALS PROVIDING ONLY DOMICILIARY CARE INELIGIBLE FOR CONSTRUCTION GRANTS

Mr. SCHWABE. Of course, there are a lot of those, and you indicate in your chart the need for mental and you also give the number of mental hospitals; that is what I was interested in, and has excited my curiosity to ask that question.

Dr. CRONIN. Well, that is correct, but under the Hill-Burton Act, as you know, the hospitals that are furnishing care, say, to the feeble-minded are not eligible for Hill-Burton money at all.

Mr. SCHWABE. I didn't know what the details of the provisions were in that regard.

Dr. CRONIN. Because we cannot furnish Federal money to these hospitals that are furnishing only what one might call custodial care to such a case as the feeble-minded, and it is forbidden by virtue of a section of the act.

Mr. SCHWABE. And likewise to the insane?

Dr. CRONIN. No, sir.

Mr. SCHWABE. What do you mean by "No, sir?" I do not understand your answer.

Dr. CRONIN. We do put money into hospitals for the mentally ill, the legally insane.

Mr. SCHWABE. Even where the States own them, as they do in most cases?

Dr. CRONIN. That is right.

Mr. SCHWABE. And——

Dr. CRONIN. I think it is less than 4 percent of all Hill-Burton projects at the present time.

Mr. SCHWABE. But there has been some money employed in that direction, as I recall it?

Dr. CRONIN. Yes, there has been.

Mr. SCHWABE. Does it include the institutions for the epileptics?

Dr. CRONIN. No.

Mr. SCHWABE. Some States, you know, maintain those?

Dr. CRONIN. Separate institutions?

Mr. SCHWABE. Yes.

Dr. CRONIN. No. They are not eligible if they furnish only domiciliary care.

Mr. SCHWABE. And does this program have anything to do with the Government-owned hospitals, such as I inquired about the other day—I don't believe you were here, though—the merchant seamen's hospitals?

Dr. CRONIN. No, sir.

Mr. SCHWABE. I think that is all at present.

Mr. FOGARTY. Mr. Busbey?

FURTHER REFERENCE TO BUDGET ESTIMATE FOR LIQUIDATION CASH

Mr. BUSBEY. Dr. Cronin, I would like to get back to the question Mr. Schwabe was pursuing before we recessed for lunch in regard to contract authority and obligation authority and getting on a cash basis.

When the appropriation bill for this department was under consideration on the floor of the House of Representatives last year on

April 17, 1951, you will find on page 4116 of the Congressional Record of that day the following debate:

Mr. FORD. Has the handling of those cases been materially helped by the transfer of $75 million from contract authorizations to a cash expenditure?

Mr. FOGARTY. No. That has nothing at all to do with it. As you know, the law authorized $75 million a year until the Congress changed it 2 years ago. At that time they authorized $150 million for hospital construction, but the Bureau of the Budget allowed only $75 million. What we are doing now is getting away from contract authorizations, committing future Congresses, and we are simply appropriating actual cash. Last year we had $75 million contract authorization for this particular program. That has been wiped out. We are appropriating actual cash this year instead of giving contract authority.

Unless I misinterpret that, I think it is a clear indication during debate that it was the intent of this committee to go on an actual pay-as-you-go basis for fiscal 1952; wouldn't you interpret that as such, Dr. Cronin?

Dr. CRONIN. I think that is correct, but these obligations, Mr. Busbey, that we are requesting this $19,700,000 for had been incurred on the basis of the contract authorization provision in previous appropriation acts of the Congress and we, in carrying out our administration, as we had carried it out over the previous years, had made the allocations to the States on the 1st of July of each year, and the States in turn had made their allocations to the respective parts of their States which were to get these hospitals, and as far as we were concerned, that was final and completed fact.

Mr. BUSBEY. That was prior to fiscal 1952?

Dr. CRONIN. That was prior to fiscal 1952.

Mr. BUSBEY. The appropriation we have under discussion today is fiscal 1953.

Dr. CRONIN. That is right. There was nothing for fiscal 1952. It was all money that had been taken care of prior to 1952.

Mr. BUSBEY. This $19,700,000 that you are asking for now, as you contend, to clean up these past obligations and get on a pay-as-you-go basis, had nothing to do with the appropriation last year. Now my interpretation would be, they go on a pay-as-you-go basis, as this committee intended. As far as my interpretation is concerned, the $19,700,000 should have been taken care of out of the appropriation for last year.

Mr. HARLOW. The figure actually is $79,700,000 that we are asking for to appropriate to liquidate contract authorization this year. As I understand it, Mr. Busbey, your interpretation of the statement made by Mr. Fogarty, it would have made it necessary for us to withdraw from the States authorizations totaling almost $80 million.

Mr. BUSBEY. Well, the allotments to the States have not been made for 1953 as yet, have they?

Dr. CRONIN. No, sir.

Mr. BUSBEY. Then if we want to really get on a cash, pay-as-you-go basis for fiscal 1953, we will have to, according to your interpretation, if we pick that $19,700,000 up in fiscal 1953, specifically write into the appropriation that that will have to be taken out of any appropriation for fiscal 1953; is that correct?

Mr. HARLOW. You are getting into water that is a little bit over my head. I say that question the lawyers will have to dig into pretty deeply before I can say you are correct.

Dr. CRONIN. This $19,700,000 is money that is necessary to cover obligations made in 1950, not out of 1951 or 1952, but back when we had contract authority, which was 1950.

Mr. BUSBEY. Let me state it another way. Unless we make a specific appropriation to include this $19,700,000 in order to get on a cash basis, or pay-as-you-go basis in fiscal 1953, we will have to write some language into the appropriation bill to take care of that.

Dr. CRONIN. I am frankly not enough a technician in the legal aspects of writing this bill to answer your question. I know we will need the $19,700,000 to cover these obligations next year, if we don't get it this year. As I testified this morning we do not think that we will need that $19,700,000 this year because the construction work on these particular projects, et cetra, in general in the program, will not call for it, but they will by this time next year be calling for it.

Mr. SCHWABE. That would be in fiscal 1954?

Dr. CRONIN. That would be in fiscal 1954.

Mr. BUSBEY. But if the committee recommends and if the Congress is inclined to go along with the committee recommendations, in order not to request that $19,700,000 for fiscal 1954, and get on a pay-as-you-go basis, we will have to make some provision in our appropriation bill for fiscal 1953. Otherwise you will be back for it in 1954.

Dr. CRONIN. That is correct.

Mr. HARLOW. I think the situation that you envisage, Mr. Busbey, could be covered this way. The 1953 cash estimate is $154,700,000, of which $79,700,000 is to liquidate contract authorizations. Now that money has been obligated, I don't see any way that Congress can avoid appropriating that. However, the $154,700,000 does include $75,000,000 for new authorizations. If you want to get your $19,700,000 back you can reduce that $75,000,000 of new money——

Mr. BUSBEY. That is right.

Dr. CRONIN. And accomplish the same thing.

EFFECT OF APPROPRIATION REDUCTION IN 1953

Mr. BUSBEY. That wouldn't interfere with making out new allotments for the States on the basis of 1953?

Dr. CRONIN. It very definitely would reduce the $75,000,000 by roughly the $20,000,000, and then the allotments to the States would be reduced by their share on a formula basis, per capita income and population, by whatever their share of $20,000,000 would be. And instead of getting their program, which they basically for 2 years figured on $150 million basis, and in 1951, because of the cut-back figured on a $75 million basis, but the Congress saw fit to give them 85, and in 1952 because of the increased costs of construction, which still holds today, 25 percent increase over 2 years ago, they got $82,500,000, the States have to plan sometime in advance for their program, so the States, I think, are planning on the basis of $75 million, assuming that that is essentially the basis of the program from the very beginning.

If that $75 million is reduced——

Mr. BUSBEY. I might say, while I presume that the States do that, they certainly have no right to do it until they find out what Congress actually appropriates.

Dr. CRONIN. I think you are perfectly correct.

Mr. BUSBEY. And to really accomplish the desire of this committee, if it is the desire of the committee to go on a pay-as-you-go-basis, we could appropriate the $79,700,000 for liquidating cash and then reduce the $75 million obligation cash by a like amount, $19,700,000, and that would accomplish the result.

Dr. CRONIN. That would accomplish the result but you would also accomplish a reduction in the program by $20 million.

Mr. BUSBEY. I appreciate that.

Dr. CRONIN. Which I think is the major point under question, to decide what should be done.

Mr. SCHWABE. That is policy.

Dr. CRONIN. Does the Congress of the United States in interest of the people of the United States want to reduce this hospital program by $20 million, and what would the effect be?

Mr. BUSBEY. I might also say as argument for the position of the committee on wanting to go on a pay-as-you-go basis that on page 4117 of the Congressional Record of April 17, 1951, this exchange took place on the floor during debate:

> Mr. PERKINS. Those laws were enacted during the Eighty-first Congress.
> Mr. FOGARTY. For construction in 1951 fiscal we appropriated $24,500,000 and gave them contract authority for $25,000,000. They are going to a straight cash basis in 1952 fiscal.

Now, I grant you that this debate did not take place on the hospital-construction program, but I merely use it to show the thinking of at least the chairman, Mr. Fogarty, in representing the views of the committee during the debate on amendments to the appropriation bill last year on the floor of the House.

Mr. FOGARTY. But I think the record should clearly show that that controversy was over the appropriation for the construction of schools in defense-impacted areas.

Mr. BUSBEY. That is correct.

Mr. FOGARTY. It was one of those unusual bills when it passed the House a year ago in that it not only authorized but appropriated money at the same time. It was something we had no control over. I pointed out on the floor at the time that it was under consideration that it not only authorized but appropriated money and gave contract authority for tha year and provided for he allocation of funds to schools in the districts in the impacted areas. They were not allocated funds as the funds are alloted under the Hill-Burton Act which allows 2 years. This was one specific year of school construction, whereas Hill-Burton allowed 2 years and in some cases the States are permitted 3 years. So there is quite a difference between the two. I am not trying to get you off your line of thought, but I thought that should be in the record because it is not a true comparison between the two grant programs.

I have read the record again, and I think I should have made myself clearer in answer to Mr. Ford at that time. He was concerned about the 88 projects that some commitments had been made to, but for which there were no funds available, and then after we had appropriated $150 million, the Bureau of the Budget impounded $75 million in connection with the over-all limitation that they were working under requiring them to impound $550 million in that year. They took $75 million from the hospital-construction appropriation. But my answer wasn't too clear to Mr. Ford at that time. If I had been

asked, I knew at the time that some of these commitments ran over a period of 2 years, and I would certainly have told them what the situation was, because I remember distinctly when we marked up the bill a year ago that we did take off $20 million, and we said to ourselves at that time that it was not a saving we were just postponing the commitment to the next year. We know it had to be paid sometime. If I had been asked those questions on the floor, I could have answered them. I will admit my answer wasn't complete on this point.

Mr. STEPHENS. Just a few words on that, Mr. Chairman. Every year since we got to liquidating contract authority we have estimated in July and August, for the amount to pay off these former commitments under congressional authority; in 1951 we asked for $15 million in July or August. The budget approved it. We came up here the following spring and went through hearings, and this committee as well as in the Senate, said, "You have got $125 millions contract authority. We owe the money. We have to pay it, but do you have to have it all now?" We went back, checked with the hospital-construction people, and they said they could get by in 1952 with a hundred million. In 1952 we asked for $120 million based on the prior July or August estimate, and the committee said to me, "Check that now, up to now; this is spring, and see what you need this year." We concluded we could defer part of that debt until 1953, so he gave us $100 million, not $120 million. Now this year, and I think there is some confusion between the $60 million and $79 million, I mean the $60 million and the $19 million, the $79,700,000 is the money that the Congress owes on former commitments, not $60 million in one place and $79 million in another, but $79 million. It would have been $80 million except for those small units that didn't take their money. They owe the $79 million the same as they did the $100 million and $125 million in prior years, and whether they appropriate a nickel for new money or not this year, they owe $79 million. Now if they are appropriated, $60 million this year, you will still owe $19 million plus. That would be following the procedure of prior years.

After that was appropriated we would be actually on a cash basis. Congress ceased in 1952 to give us any more contract authority to obligate money they didn't appropriate, but we still owe some money today—$79.7 million—of former authorizations or commitments by the Congress.

CONTROLLING FACTORS IN FORMULA FOR ESTABLISHING GRANTS

Mr. BUSBEY. Dr. Cronin, on page 637 of the hearings of last year, in your statement to the committee you said the following:

> Now as we move along we are justifying a request here this afternoon for $75 million for fiscal 1952 to be allotted to the States in accordance with the statutory formula utilizing population and per capita income as the controlling factors.

What is that formula, utilizing the population and per capita income as the controlling factors?

Dr. CRONIN. That has reference, Mr. Busbey, to the formula as defined in Public Law 725, which formula controls the amount of allocations that each individual State will receive from the total amount of money that Congress appropriates each fiscal year. That formula is a very complicated formula and the two major factors in

the formula, which are the controlling factors, are these: The per capita income of the State and the population of the State. Those are the two controlling factors as to how much money any single State gets. A State with a high per capita income and a high population would get so much money; a State with a high population and a low per capita income would get more money than a State that had the high per capita income; and that, as far as the writers of the bill were concerned, and the backers, Senator Hill, of Alabama, and Senator Burton, of Ohio, could determine was the most equitable way they could think of at that time to allocate these general funds for the purpose and intent of building hospitals and related health facilities.

Mr. BUSBEY. In other words, you have no jurisdiction over that other than what you have been doing unless the law is changed, setting up a new formula?

Dr. CRONIN. That is correct. All we do is apply what the law says. No administrative discretion whatsoever.

METHODS USED BY STATES TO NOTIFY COMMUNITIES OF CONSTRUCTION PROGRAM

Mr. BUSBEY. The reason I asked the question is because it does seem like there is a tremendous discrepancy in the amounts allotted to States in accordance with your table of justifications on pages 81 and 82. Illinois, notwithstanding the fact it is, I believe, the third largest State in the United States, received $2,666,429 in 1951, compared with larger amounts for States, for instance, like Alabama, which received $2,901, 596; Georgia received $2,962,605; Mississippi received $2,522,946; North Carolina received $3,620,615; South Carolina, $2,084,809; Texas, $5,359,392. It just seemed to me that with the amount of money that Illinois pays into the Federal Treasury every year and only gets back 7 percent, that there is certainly some discrimination in the formula against such States as Illinois. I don't see why some of these sparsely settled States, particularly in the South, should get so much money compared to what Illinois draws out of the grants. That is just my personal opinion, regardless of the formula, and I think that might be part of the basis why I so vigorously oppose Federal participation in most everything in comparison to the States assuming burdens.

Now, what means or methods do the various States use to advise the communities of this program and their rights under the program?

Dr. CRONIN. The major method they use is the publication of the State plan, which is required under Public Law 725. Other methods they use in the various States, which I might state is carried on by the States, because there is none of this money that the Congress appropriates for the program for construction permitted to go to employ individuals to carry on any propaganda or administer the program within the State. The construction money goes to the contractor who does the job. The designated State agencies in their health departments—all but eight States have the program in the health department; these are separate commissions in those eight respective States—have programs that if a community within the State needs a hospital, that community has the privilege of coming to the State agency and inquiring about how they get a hospital. Usually you don't have to

be too much concerned about a community that needs a hospital because most of them are sufficiently aware of the fact that this program is in existence. We have 1,700 projects and all the States have built hospitals and health centers under the Hill-Burton program. They know about it and go see their State health officers and there is no need really to what one might call beat the drums or things like that to get hospitals. People are crying for them. Again I point ou that with the deficiency of 874,000 beds certainly the population of the country is aware of it. They can't get in the hospitals in many instances, have to go long distances to get to hospitals, and people in those communities try to solve those problems.

CONTRACT PROVISIONS

Mr. BUSBEY. I believe you stated that any States participating in this program could not discriminate against anyone as to race, creed, or color?

Dr. CRONIN. That is correct.

Mr. BUSBEY. How does that work out in the States in the deep South, as they refer to the Southern States sometimes?

Dr. CRONIN. There has been no discrimination that I am aware of in any of the hospitals in the program, whether in the deep South, far North, far West, or along the east coast. You know and I know, and everybody else knows, that there is a problem in the South in certain racial groups because of the cultural pattern, but I think the South, by and large, at least in the medical field, has done quite well in doing the best they can to handle that problem. In many of the hospitals I have visited I have found certainly segregation within the hospital. There is nothing in the law that does not permit segregation within the hospital, but facilities within the hospital have been provided for these different racial groups, and they are doing very well and there is no discrimination.

Mr. BUSBEY. What methods do you use to ascertain whether or not there has been discrimination?

Dr. CRONIN. No. 1, as far as the construction of the hospital is concerned, our problem and our participation in the matter can only go up to the time that the hospital is completed, because we are, by section 635 of Public Law 725, not permitted in any way to have anything to do with administration and selection of personnel or operation of that hospital. It is the community's problem after that time.

However, in the beginning, when the community first seeks the money and makes application for it, we require, as the law requires of us, a signed statement from the people seeking the project approval and subsequently the money for constructing the hospital that it is first, a nonprofit institution; second, it will render a community service; and third, it will not discriminate against race, creed, and color, and those provisions of the contract are binding.

If there is or was a situation where there was discrimination going on, I am sure the representative of the people in that area would be so advised, and he in turn would advise the general counsel of the Federal Security Agency or the Attorney General's office and investigate the matter.

Mr. BUSBEY. I am not as sure as you that the representative would be informed in some of those communities, Dr. Cronin.

Dr. CRONIN. I am not an authority on that subject, Mr. Busbey.

Mr. BUSBEY. It seems to me that if that provision is in the law, which I know it is, that someone ought to be responsible to see that it is lived up to other than the community. As long as they are getting Federal funds, some agency of the Federal Government ought to be responsible for that. To me it is like writing a law without a penalty. Some criminal code, for example.

Dr. CRONIN. All that Public Law 725 permits the Public Health Service to do is to acquire the assurances. We do that and have done that in each instance. We have no compliance powers, we have no police powers in regard to that particular act at all.

Mr. BUSBEY. That is similiar to a situation I found in Italy last summer. They made a great point over the fact when I called their attention to the tremendous amount of untold wealth that wasn't being taxed, that they had passed a new tax-reform law, where people had to fill out income-tax returns, the same as we do in the United States. But then I asked them what the penalty was if they didn't fill out the papers. They said there is no penalty. So it seems to me any of these communities can sign a contract saying that they will live up to the law but it doesn't mean anything. It sounds good and reads good in the law but in practice it doesn't mean a thing.

Dr. CRONIN. There is one other factor that might be influential there, and that is 14 of the States have State aid that they provide to those hospitals for construction purposes and in those States they, too, are a party to the contract with the Federal Government. It is then in these States the community, the State, and the Federal Government that puts up the money. In all the other States it is the community plus the Federal Government. That is a deterring factor, I think, in regard to anyone who would willfully violate this discrimination clause, because it is very difficult to take a State institution receiving—an institution receiving State funds as well as Federal funds—and flagrantly violate the discrimination clause, I think, in this particular period of history and get away with it.

Mr. HARLOW. Would you like the particular section of the law read into the record at this time?

Mr. FOGARTY. Put it in the record.

(The information referred to is as follows:)

APPROVAL OF PROJECTS AND PAYMENTS FOR CONSTRUCTION

SEC. 625. (a) For each project for construction pursuant to a State plan approved under this part, there shall be submitted to the Surgeon General through the State agency an application by the State or a political subdivision thereof or by a public or other nonprofit agency. If two or more such agencies join in the construction of the project, the application may be filed by one or more of such agencies. Such application shall set forth (1) a description of the site for such project; (2) plans and specifications therefor in accordance with the regulations prescribed by the Surgeon General under section 622 (e); (3) reasonable assurance that title, as defined in section 631 (j), to such site is or will be vested in one or more of the agencies filing the application or in a public or other nonprofit agency which is to operate the hospital; (4) reasonable assurance that adequate financial support will be available for the construction of the project and for its maintenance and operation when completed; (5) reasonable assurance that the rates of pay for laborers and mechanics engaged in construction of the project will be not less than the prevailing local wage rates for similar work as determined in accordance with Public Law 403 of the Seventy-fourth Congress, approved August 30, 1935, as amended; and (6) a certification by the State agency of the Federal share for the project. The Surgeon General shall appro[illegible] such

application if sufficient funds to pay the Federal share of the cost of construction of such project are available from the allotment to the State, and if the Surgeon General finds (A) that the application contains such reasonable assurance as to title, financial support, and payment of prevailing rates of wages; (B) that the plans and specifications are in accord with the regulations prescribed pursuant to section 622; (C) that the application is in conformity with the State plan approved under section 623 and contains an assurance that in the operation of the hospital there will be compliance with the applicable requirements of the State plan and of the regulations prescribed under section 622 (f) regarding the provision of facilities without discrimination on account of race, creed, or color, and for furnishing needed hospital facilities for persons unable to pay therefor, and with State standards for operation and maintenance; and (D) that it has been approved and recommended by the State agency and is entitled to priority over other projects within the State in accordance with the regulations prescribed pursuant to section 622 (d). No application shall be disapproved until the Surgeon General has afforded the State agency an opportunity for a hearing.

EXPIRATION OF HILL-BURTON PROGRAM

Mr. BUSBEY. As I understand it this law expires on June 30, 1955?

Dr. CRONIN. June 30, 1955, by virtue of Public Law 380, is the last time that an appropriation can be made available for the purposes of the Hill-Burton program, unless new legislation is introduced to carry on this program. It doesn't mean on July 1, 1955, we lock our doors for the simple reason that the money, if appropriated for 1955 fiscal year, would still have 2 years to run and we would still have problems in relationship to the projects for that 2-year period, and to clean up, probably longer. But I can assure you, Mr. Busbey, that at the rate we are going of whittling down that 874,000-bed deficiency in this country, when we have only been able to introduce 81,000 beds, that by 1955 at the appropriation rate that has been the experience in the past, total appropriation of Congress, we won't be any way near cutting down that 874,000-bed deficiency. We will still have it on our shoulders.

Mr. BUSBEY. I grant you that and I am not against the program of hospital construction, but I have been and I will continue to be for a program that makes the States take a bigger participation in it. Of course that will come up when new legislation is considered by the Congress, and I may not be here then. They are still my ideas.

That is all. Thank you.

BUDGET ESTIMATE FOR SALARIES AND EXPENSES

Mr. FOGARTY. In 1952 you had available $1,238,965 for salaries and expenses, and you are asking for $1,217,000 for 1953 with no change in positions. Your 1953 request is a decrease of $21,965?

Dr. CRONIN. That is correct.

Mr. FOGARTY. Do you have any further questions, Mr. Schwabe?

Mr. SCHWABE. No, thank you.

Mr. FOGARTY. Thank you very much, Doctor.

HOSPITALS AND MEDICAL CARE

WITNESSES

DR. G. HALSEY HUNT, CHIEF, DIVISION OF HOSPITALS
DR. JACK MASUR, CHIEF, BUREAU OF MEDICAL SERVICES
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$28,974,000	$30,200,000	$32,930,000
Proposed supplemental due to pay increases		1,417,000	
Reimbursements from non-Federal sources	520,551	657,774	711,703
Reimbursements from other accounts	6,446,985	7,059,948	5,181,528
Total available for obligation	35,941,536	39,334,722	38,823,231
Unobligated balance, estimated savings	−44,105		
Obligations incurred	35,897,431	39,334,722	38,823,231
Comparative transfer from "Employee health service programs, Public Health Service"	308,672		
Comparative transfer to "Salaries and expenses, Public Health Service"	−19,250	−21,550	
Total obligations	36,186,853	39,313,172	38,823,231

NOTE.—Reimbursements from non-Federal sources above are for medical services provided to foreign seamen, voluntary addicts, and for dependent care and out-patient visits in accordance with 42 U. S. C. 221.

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct Obligations			
Appropriated funds:			
1. Operation of hospitals	$24,364,336	$26,634,831	$27,921,835
2. Operation of out-patient clinics and offices	3,117,273	3,449,564	3,468,080
3. Operation of health units	7,925	9,329	9,580
4. Coast Guard, medical services	805,785	853,519	857,156
6. Administration	665,169	618,207	673,349
Total appropriated funds	28,960,488	31,595,450	32,930,000
Reimbursements from non-Federal sources:			
1. Operation of hospitals	520,551	657,774	711,703
Total direct obligations	29,481,039	32,253,224	33,641,703
Obligations Payable Out of Reimbursements From Other Accounts			
1. Operation of hospitals	6,215,085	6,148,158	4,263,458
3. Operation of health units	258,829	331,590	335,570
5. Personnel detailed to other agencies	231,900	580,200	582,500
Total obligations payable out of reimbursements from other accounts	6,705,814	7,059,948	5,181,528
Total obligations	36,186,853	39,313,172	38,823,231

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Summary of Personal Services			
Total number of permanent positions	7,962	7,712	7,729
Full-time equivalent of all other positions	147	147	147
Average number of all employees	7,622	7,418	7,344
Average salaries and grades:			
General schedule grades:			
Average salary	$3,282	$3,691	$3,701
Average grade	GS–4.3	GS–4.3	GS–4.3
Crafts, protective, and custodial grades:			
Average salary	$2,667	$3,031	$3,015
Average grade	CPC–3.3	CPC–3.5	CPC–3.5
Personal service obligations:			
Permanent positions	$26,408,996	$28,803,713	$28,579,135
Part-time and temporary positions	1,002,953	1,050,516	945,506
Regular pay in excess of 52-week base	51,556	138,455	83,889
Payment above basic rates	870,171	946,288	932,370
Total personal service obligations	28,333,676	30,938,972	30,558,900
Direct Obligations			
Appropriated funds:			
01 Personal services	22,532,128	24,603,580	25,706,067
02 Travel	233,473	227,100	206,575
03 Transportation of things	187,579	193,580	172,425
04 Communication services	97,080	99,800	91,570
05 Rents and utility services	473,311	444,330	454,440
06 Printing and reproduction	63,842	64,880	60,630
07 Other contractual services	895,034	965,970	939,120
Services performed by other agencies	304,150	363,200	436,100
08 Supplies and materials	4,476,378	4,718,380	5,021,509
09 Equipment	396,886	584,290	562,670
11 Grants, subsidies, and contributions	17,411	19,000	21,300
13 Refunds, awards, and indemnities	2,568	800	800
15 Taxes and assessments	11,266	34,940	36,930
Subtotal	29,691,106	32,319,850	33,712,536
Deduct charges for quarters and subsistence	730,618	724,400	782,536
Total appropriated funds	28,960,488	31,595,450	32,930,000
Reimbursements from non-Federal sources:			
01 Personal services	412,206	525,741	565,190
02 Travel	3,631	4,069	3,866
03 Transportation of things	3,264	3,848	3,773
04 Communication services	1,716	2,030	2,036
05 Rents and utility services	9,956	10,619	11,451
06 Printing and reproduction	1,013	1,171	1,283
07 Other contractual services	7,097	8,624	9,510
08 Supplies and materials	89,089	105,695	120,262
09 Equipment	7,959	12,700	13,394
15 Taxes and assessments	218	789	882
Subtotal	536,149	675,286	731,649
Deduct charges for quarters and subsistence	15,598	17,512	19,946
Total obligation payable out of reimbursements from non-Federal sources	520,551	657,774	711,703
Total direct obligations	29,481,039	32,253,224	33,641,703
Obligations Payable Out of Reimbursements From Other Accounts			
01 Personal services	5,389,342	5,809,651	4,287,643
02 Travel	45,027	38,831	23,959
03 Transportation of things	42,051	36,272	22,902
04 Communication services	21,027	19,570	12,794
05 Rents and utility services	118,863	99,251	68,607
06 Printing and reproduction	12,718	11,849	8,587
07 Other contractual services	85,734	82,606	58,970
08 Supplies and materials	1,069,327	996,125	728,629
09 Equipment	105,303	122,010	83,536
15 Taxes and assessments	2,648	7,471	5,388
Subtotal	6,892,040	7,223,636	5,301,015
Deduct charges for quarters and subsistence	186,226	163,688	119,487
Total obligations payable out of reimbursements from other accounts	6,705,814	7,059,948	5,181,528
Total obligations	36,186,853	39,313,172	38,823,231

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$3,390,755	$3,840,266	$3,056,812
Obligations incurred during the year	35,897,431	39,334,722	38,823,231
	39,288,186	43,174,988	41,880,043
Deduct:			
Reimbursable obligations	6,967,536	7,717,722	5,893,231
Unliquidated obligations, end of year	3,840,266	3,056,812	1,511,792
Obligated balance carried to certified claims account	26,660		
Total expenditures	28,453,724	32,400,454	34,475,020
Expenditures are distributed as follows:			
Out of current authorizations	26,403,842	27,488,474	31,680,000
Out of prior authorizations	2,049,882	3,580,000	2,710,000
Out of anticipated 1952 supplemental for pay increases		1,331,980	85,020

Mr. FOGARTY. Dr. Hunt, you are here to justify the appropriation request for the "Hospitals and medical care" item; is that right?

Dr. HUNT. Yes.

Mr. FOGARTY. Do you have a statement for the committee?

GENERAL STATEMENT

Dr. HUNT. I have no formal statement, Mr. Chairman. I would like to make a few remarks if I may. This appropriation for hospitals and medical care has continued to support the direct medical-care activities of the Public Health Service. As we have said in the past, these activities started in 1798, when the Congress first provided medical care for American seamen, and have continued since that time. Various other beneficiaries have been added, and we now have a considerable number of beneficiary groups for whose medical care the Congress has accepted responsibility, and to whom we give the medical care.

PRINCIPAL GROUPS RECEIVING MEDICAL CARE

Mr. FOGARTY. Name those groups, please.

Dr. HUNT. The principal groups are American seamen, officers and men of the Coast Guard, Federal employees hurt at work, patients with leprosy, patients suffering from narcotic addiction.

In addition, there are a great many minor groups. We can furnish the full list for the record if you wish.

Mr. FOGARTY. Yes; do that.

(The information referred to is as follows:)

Classes of patients treated in Public Health Service hospitals

Class of patient	Legal and regulatory authority	
	Public Law 410, 78th Cong.	Public Health Service regulations
A. Direct beneficiaries of the Public Health Service:		
American seamen	322 (a) (1)	32.11.
Seamen:		
U. S. Army Engineer Corps	322 (a) (3)	32.46.
Water Division, U. S. Army Transportation Corps (ATS)	322 (a) (3)	32.46.
Tanker Transport Branch, U. S. Navy (civilian)	322 (a) (3)	32.46.
Mississippi River Commission	322 (a) (5)	32.51.
Fish and Wildlife Service	322 (a) (5)	32.56.
State school ships	322 (a) (3)	32.46.
Cadets on State training ships	322 (a) (4)	32.76.
Cadets at State maritime academies	322 (a) (4)	32.76.
Merchant Marine cadets	322 (a) (6)	32.61.
Maritime Service enrollees	322 (a) (6)	32.61.
Coast Guard personnel	326 (a) (1)	31.2 (a).
Active: Regular and Reserve Corps.		
Retired: [1]		
Regular Corps.		
Reserve Corps when retired for disability.		
Coast and Geodetic Survey officers and crew members	326 (a) (2)	31.2 (b).
Active.		
Retired.[1]		
PHS commissioned officers	326 (a) (3)	31.2 (c).
Active: Regular and Reserve Corps.		
Retired: [1]		
Regular Corps.		
Reserve Corps when retired for disability.		
Personnel of former Lighthouse Service	710 (b)	31.11.
Active.		
Retired.[1]		
Dependents [2] of Coast Guard personnel	326 (b)	31.9 (a).
Active: Regular and Reserve Corps.		
Retired:		
Regular Corps.		
Reserve Corps when retired for disability.		
Dependents [2] of Coast and Geodetic Survey officers and crew members	326 (b)	31.9 (b).
Active.		
Retired.		
Dependents [2] of PHS commissioned officers	326 (b)	31.9 (c).
Active: Regular and Reserve Corps.		
Retired:		
Regular Corps.		
Reserve Corps when retired for disability.		
PHS civilian field employees [3] injured or taken ill in line of duty	322 (a) (7)	32.81.
Federal employee beneficiaries of the Bureau of Employees' Compensation [4]	324	32.6 (c) (4).
Quarantine patients [5] (communicable diseases)	322 (c)	32.6 (c) (2).
Persons afflicted with leprosy [6] (Hansen's disease)	331	32.86.
Narcotic addicts [7]	341	33.7.
B. Other patients eligible for care on a reimbursable or full-pay basis:		
1. Seamen employed on foreign flag vessels	322 (b)	32.106.
2. Immigration and Naturalization Service patients	322 (c); 502	32.6 (c) (3).
3. Former relief employees of the Works Project Administration; Civilian Conservation Corps, National Youth Administration (beneficiaries of the Bureau of Employees' Compensation).	327	32.6 (c) (5).
4. Beneficiaries of the Veterans' Administration	327	32.6 (c) (5).
5. Beneficiaries of the Department of the Army	327	32.6 (c) (5).
6. Beneficiaries of the Navy Department (includes Navy and Marine Corps personnel).	327	32.6 (c) (5).
7. Beneficiaries of the Office of Vocational Rehabilitation	327	32.6 (c) (5).
8. Beneficiaries of the Bureau of Prisons	327	32.6 (c) (5).
9. Beneficiaries of the State Department (Foreign Service employees).		
C. Persons not otherwise eligible for treatment:		
Patients admitted for special study purposes	301 (f)	32.6 (c) (1).
Patients admitted for emergency treatment	322 (d)	32.6 (a) (12).

[1] Elective medical or surgical treatment requiring hospitalization will be furnished only at hospitals operated by the Public Health Service. Dental treatment will be furnished to the extent of facilities actually available within the physical limits of the station where full-time dental officers are on duty; at other medical care stations the dental treatment shall be limited to emergency measures necessary to relieve pain.

[2] Hospitalization is furnished only at PHS hospitals and reimbursement is made to the Service at the

(Footnotes continued on page 569)

Dr. HUNT. Those that I have mentioned constitute probably 80 to 90 percent of our patients, or at least they are the groups for whom we spend most of our time and energy.

EFFECT OF DEFENSE ACTIVITIES ON PATIENT LOAD

Since we were here last we have had some added problems and complexities because of the international situation. Shipping has increased during the past year and a half. Over 800 Ships have been recommissioned from the so-called moth-ball fleet, and are now in active maritime service.

During the past few months, the Congress has authorized an increase in the Coast Guard amounting to about 45 percent in the total strength, which means that we will have an added load of patients in our hospitals. Besides that we have already been called upon for the assignment of additional officers to Coast Guard vessels and shore stations, receiving stations, training stations, air stations, and so on.

Our total patient load for next year is somewhat lower; that is, the average daily patient load is somewhat lower than our load during the current year.

There is one group whom I didn't mention earlier, namely, the veterans, for whom we do provide a certain amount of service at the request of the Veterans' Administration on a reimbursable basis in areas where their facilities are not completely sufficient.

Mr. BUSBEY. May I ask a question right there, Mr. Chairman?

Mr. FOGARTY. Yes.

REIMBURSABLE AND NONREIMBURSABLE GROUPS OF PATIENTS

Mr. BUSBEY. Are you reimbursed by the Veterans' Administration for those cases?

Dr. HUNT. Yes, sir.

Mr. BUSBEY. Is there any such arrangement like that with the Treasury Department for Coast Guard cases, inasmuch as the Coast Guard comes under the Treasury Department?

Dr. HUNT. The medical service to the Coast Guard has always been within our own budget, as a direct appropriation. It shows as one project within this appropriation now before you.

Mr. BUSBEY. Any member of the Coast Guard or the merchant marine is entitled to hospitalization?

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rate of $1.75 per diem. Dental treatment shall be furnished to the extent of available facilities only at medical care stations where full-time dental officers are on duty.

[2] Dental treatment is limited to that which is necessary for allaying of pain and treatment of acute oral pathological conditions. Fillings, dentures, and other related services required as a result of treatment of the aforementioned conditions may be furnished within the limits of available facilities at the station, exclusive of contract services.

[4] All services must be authorized by the Bureau of Employees' Compensation; voucherable expenditures are payable by that agency.

[5] Services must be authorized by responsible representatives of the Division of Foreign Quarantine of the Public Health Service and voucherable expenditures are payable by that Division.

[6] Treatment is furnished only at the Carville, La., Hospital and for temporary periods at any other Service hospital which has suitable facilities for the accommodation of such patients.

[7] Treatment is furnished only at the Public Health Service Hospitals at Lexington, Ky., and Fort Worth Tex. Patients make direct application to those hospitals. Voluntary patients who are financially able, are expected to pay $5 per day while hospitalized.

NOTE.—Beneficiaries will be furnished eyeglasses as a part of treatment being given for disease or injury, but will not be furnished eyeglasses for correction of errors of refraction unrelated to disease or disability requiring treatment. However, voucherable expenditures may be incurred, if necessary, for refractions regardless of whether required as part of treatment or only to determine need for eyeglasses.

Dr. HUNT. Any member of the Coast Guard is entitled to hospitalization and medical care wherever he may be. A member of the merchant marine, that is, an active merchant seaman, is entitled to full medical care to the extent that facilities are available. That means by and large that treatment is available for them in our own hospitals and outpatient clinics. There is a slight distinction there, because we have a broader responsibility for the Coast Guard, since we are in effect the medical arm of the Coast Guard, and have the same relation to them really that the Medical Corps of the Army has to the officers and men of the Army.

EFFECT OF DECREASE IN REIMBURSABLE PATIENT LOAD

The veteran load for next year will be lower than during the present fiscal year. The result of that, as I say, is that our total patient load will be somewhat lower while our load of direct beneficiaries will increase. I have a chart here which shows this graphically. These are the four fiscal years beginning with 1950, the blue column represents the nonreimbursible group for whom we are legally responsible and who are provided for by appropriated funds in this appropriation. The yellow bars at the top represent the reimbursible group and you will see that that is contracting steadily from 1951 to 1952 to 1953, while the direct beneficiary load is continuing to rise as a result of the various factors which I mentioned earlier.

The direct beneficiary group goes above 6,000 next year, while the total load will remain about 7,000. This is the average number of patients in the hospital every day.

STEADY INCREASE IN OUT-PATIENT SERVICE AND DIRECT BENEFICIARY LOADS

There is one other point here which is of extreme importance. You have heard earlier today of the importance of good out-patient care. We believe in that in our own hospitals and we are trying to the greatest possible extent to carry on the proper medical care of our beneficiaries without bringing them into the hospital, which is, as we all know, more expensive. On the other hand, a good out-patient service in itself is less expensive but not cheap.

We have, therefore, been stressing our outpatient services, building them up, and you see here the result of it. In 1950, we had about 550,000 visits to the out-patient departments of our hospitals. That has risen steadily in 1951 and 1952; then, in 1953 it will go well over 600,000 out-patient visits. That goes along with the lowered total in-patient load here, but if you look at the trend of the direct beneficiary load, we are going up in that respect also.

CONTROL OF PATIENT LOAD

Mr. FOGARTY. There isn't much you can do about controlling that load, is there?

Dr. HUNT. The over-all load is almost entirely outside of our control; yes, sir. The load of the veterans is agreed upon by tripartite negotiation among ourselves, the Veterans' Administration, and Bureau of the Budget. We understand that there will be a lowered budget for the Veterans' Administration next year because they are not sending us so many patients. Of course, that is a very small item

in their budget but it will show up as a reduction there, and as a loss in effect to our appropriation because we will have a smaller amount of money from reimbursements.

REASON FOR DIRECT APPROPRIATION INCREASE

The increase in our budget for next year is made up almost entirely of that item plus the effect of the pay act increase.

Mr. FOGARTY. What item?

Mr. HUNT. The change from reimbursable patients to nonreimbursable patients. About $1,800,000 of our increase represents a change from reimbursed funds to directly appropriated funds; about $1,400,000 represents the effect of the pay act.

Mr. FOGARTY. Have you finished your statement?

Dr. HUNT. Yes, sir.

DECREASE IN TOTAL FUNDS AVAILABLE

Mr. FOGARTY. Doctor, in 1952 you estimate you will have available $39,313,000 and this year you are asking for $38,823,000, which shows a reduction of $489,000, taking into consideration reimbursements as well as the appropriation.

Dr. HUNT. Yes, sir.

INCREASE IN PERSONAL SERVICE REQUIREMENTS

Mr. FOGARTY. It shows reduction of $489,000, but you show an increase of 17 positions, from 7,712 to 7,729.

Dr. HUNT. Those are 12 in the out-patient operation and it goes along with what I was just saying about our increased out-patient load. There are five positions for increase to the Coast Guard; that is, men assigned to the Coast Guard.

Mr. FOGARTY. That is all you need, if the Coast Guard is going to increase its personnel by 45 percent?

Dr. HUNT. It is all we are asking for. We will have to absorb any additional requirement of the Coast Guard within our general position structure.

EXPLANATION OF AVERAGE EMPLOYMENT DECREASE

Mr. FOGARTY. You show the large decrease of $543,000 in the operation of hospitals but you show no decrease in positions. Would you explain that?

Dr. HUNT. That is a decrease in the average number of people on duty without a decrease in the number of positions, because with many stations, many hospitals and clinics, we did not feel that we could properly cut out positions. What we are planning to do to live within this is to have a longer period of time between the becoming vacant of one position and its being refilled, so that on the over-all our average employment for the year will be at the lower figure.

EMPLOYMENT AS OF JANUARY 1952

Mr. FOGARTY. What is your employment today?

Dr. HUNT. As of January 1 our average employment was 7,493 total, with 6,779 in the hospitals.

Mr. FOGARTY. You actually had 6,779 on the payroll in connection with the activity "Operation of hospitals"?

Dr. HUNT. On January 1; yes, sir.

SUPPLEMENTAL APPROPRIATION REQUEST FOR 1952

Mr. FOGARTY. You are asking for a supplemental of $1,417,000.

Dr. HUNT. That is correct.

ESTIMATED COST OF PAY INCREASES

Mr. FOGARTY. What is your anticipated cost of the pay increases during 1952?

Dr. HUNT. $2,070,250.

Mr. FOGARTY. So you are absorbing $653,000?

Dr. HUNT. Well, yes; we are absorbing $167,000.

Mr. FOGARTY. $167,000.

Dr. HUNT. The rest is made up by an increase in the reimbursement rate which was imposed during the year.

SOURCE AND AMOUNTS OF REIMBURSEMENT

Mr. FOGARTY. You estimate $7,717,000 reimbursements during the year 1952?

Dr. HUNT. That is the 1952 estimate.

Mr. FOGARTY. Where do you get that money?

Dr. HUNT. In round figures, $4,900,000 from the Veterans' Administration for taking care of their patients, $100,000 from the armed services, $270,000 from Immigration, $570,000 for taking care of foreign seamen, and $78,000 for smaller groups, miscellaneous.

Mr. FOGARTY. Does that add up to $7,700,000?

Dr. HUNT. That was only in the general hospitals. I will continue: $790,000 in the neuropsychiatric hospitals; $330,000 from the operation of health units for other agencies of Government; and $580,000, personnel detailed to other agencies.

AMOUNT OF BUDGET REQUEST

Mr. FOGARTY. Now, the actual appropriation that we are asked to appropriate in this bill is not the $38,800,000 but $32,930,000. Is that right?

Dr. HUNT. That is right.

Mr. FOGARTY. You have available $30,200,000 of appropriated funds for the current year.

Dr. HUNT. That is right.

Mr. FOGARTY. That was an increase, was it not, over 1951?

Dr. HUNT. One million dollar increase in the direct appropriation.

Mr. FOGARTY. You received an increase of about $1 million a year ago, didn't you?

Dr. HUNT. Yes, sir; $1,176,000.

AMOUNT OF INCREASE REQUESTED

Mr. FOGARTY. And you are asking for an increase of $2,730,000 more this year.

Dr. HUNT. In appropriated funds.

Mr. FOGARTY. That $30,200,000 does not include the proposed supplemental?

Dr. HUNT. $30,200,000 does not include the pay act.

Mr. FOGARTY. It would be $31,617,000 with that, would it not?

Dr. HUNT. That is right.

BREAKDOWN OF INCREASE BY ACTIVITY

Mr. FOGARTY. It would actually be an increase of $1,313,000.

Give us a breakdown of that $1,313,000.

Mr. HARLOW. That shows on 107–A, in another form. That is the last sheet. You may not even have it in your book.

Mr. FOGARTY. I have it.

Dr. HUNT. The operation of hospitals shows a decrease of $543,767. The operation of outpatient clinics and offices shows an increase of $18,516. Operation of health units shows an increase of $4,231. The Coast Guard shows an increase of $3,637. Administration shows an increase of $25,142. Personnel detailed to other agencies shows an increase of $2,300. Those all add up to a net program decrease of $489,941. In addition, there is a decrease of $21,550——

Mr. FOGARTY. What is that?

Dr. HUNT. There is a decrease shown toward the bottom of $21,550, which is because last year there was a comparative transfer to "Salaries and expenses, Public Health Service," which we do not have this year.

Offsetting those are the two large items of increase: $1,417,000 which is equivalent to the proposed 1952 Pay Act increase supplemental, and the second increase of $1,824,491, which is the net increase in appropriated funds required because of the decrease in reimbursements anticipated.

Mr. FOGARTY. In the operation of hospitals?

Dr. HUNT. The increase required for the operation of hospitals is $1,830,771, with decreases in operation of the health units of 3 million 980——

Mr. SCHWABE. Three thousand.

Dr. HUNT. I beg your pardon; I am just a thousand times too great; $3,980, details to other agencies, a drop of $2,300.

(The following summary was subsequently furnished at the request of the committee:)

HOSPITALS AND MEDICAL CARE, PUBLIC HEALTH SERVICE, 1953 BUDGET—EXPLANATION OF REQUIREMENT FOR $1,313,000 INCREASE IN APPROPRIATED FUNDS BECAUSE OF REDUCTION IN REIMBURSEMENTS

Of the increase of $1,313,000 requested for the fiscal year 1953, $1,287,004, or 98 percent of the total, is required for the operation of hospitals. This amount will provide care for an increased number of American seamen working in a merchant marine expanded by reactivated shipping, for a large number of Coast Guard men reflecting a 45-percent increase in Coast Guard complement, and for a greater number of patients who are treated as out-patients in hospitals.

The decrease in reimbursements of $1,824,491 represents for the most part a reduction in the number of veteran patients to be cared for in the Public Health Service hospitals. It should be noted that the total cost of operating the hos-

pitals, covered by the combined resources of direct appropriation and reimbursements, will be $543,767 less than in 1952. This will require a decrease of 108 in average employment in the hospitals between 1952 and 1953.

In estimating this decrease full effect has been given to the relatively small drop in total patient load. However, because of the dispersion of our patients in 23 hospitals and because of the necessity for maintaining basic professional skills and auxiliary staffs used in each hospital, the maximum reduction that can be made is a 108-man-year decrease in nursing and dietetic services engaged in direct care of the whole patient group. This cut in staffing results in a request for only $1,313,000 of appropriated funds to replace the $1,824,491 decrease in reimbursements, as shown below:

Summary of fiscal year 1953 increases and decreases from 1952

	Sources of funds		Net program change
	Appropriated funds	Reimbursements	
Operation of hospitals	+$1,287,004	−$1,830,771	−$543,767
Operation of out-patient clinics and offices	+18,516		+18,516
Operation of health units	+251	+3,980	+4,231
Coast Guard, medical services	+3,637		+3,637
Administration	+25,142		+25,142
Personnel detailed to other agencies		+2,300	+2,300
Adjustment for comparative transfer	−21,550		−21,550
Subtotal	[1] +1,313,000	−1,824,491	−511,491

[1] Excludes the effect of proposed 1952 supplemental of $1,417,000 due to pay increase. (See p. 89, "Hospitals and medical care" appropriation request, item 2 of additions for 1952.) This pay raise requirement plus the $1,313,000 above makes up the total requested increase of $2,730,000 in 1953.

NUMBER OF HOSPITALS IN OPERATION

Mr. FOGARTY. How many hospitals do you operate now?

Dr. HUNT. Twenty-three.

Mr. FOGARTY. Will you put a list of those in the record?

(The information is as follows:)

LIST OF USPHS HOSPITALS

Location	*Street address*
Baltimore, Md	Wyman Park Drive and 31st St.
Out-patient department annex	Customhouse, Baltimore, Md.
Boston (Brighton), Mass	77 Warren St.
Brooklyn, N. Y	Manhattan Beach (tuberculosis).
Carville, La	PHS Leprosarium.
Freight and express address	St. Gabriel, La.
Chicago, Ill	4141 Clarendon Ave.
Out-patient department annex	560 Federal Building and 517 East Wisconsin Ave., Milwaukee, Wis.
Cleveland, Ohio	Fairhill Rd. and East 124th St.
Detroit, Mich	Windmill Pointe.
Fort Stanton, N. Mex	(Tuberculosis sanatorium.)
Freight and express address	Carrizozo, N. Mex.
Fort Worth, Tex	(Drug addiction and mental illness.)
Galveston, Tex	45th St. and Avenue N.
Kirkwood, Mo	525 Couch Ave.
Out-patient department annex	Room 204, 815 Olive St., St. Louis, Mo.
Lexington, Ky	(Drug addiction and mental illness.)
Memphis, Tenn	Delaware and California Sts.
Mobile, Ala	800 St. Anthony St.
New Orleans, La	210 State St.
Out-patient department annex	Customhouse, New Orleans, La.
Norfolk, Va	Hampton Blvd., Larchmont.
Portland, Maine	331 Veranda St.

LIST OF USPHS HOSPITALS—Continued

Location	*Street address*
San Francisco, Calif.	15th Ave. and Lake St.
Out-patient department annex	Appraisers Building, Washington and Sansome Sts.
San Juan, P. R.	Post office box 3788.
Savannah, Ga.	York and Abercorn Sts.
Out-patient department annex	403 Federal Building, Jacksonville, Fla., or Box 4788, Jacksonville, Fla.
Seattle, Wash.	Post office box 3145.
Staten Island, N. Y.:	
Express address	Stapleton, N. Y.
Freight address	Tompkinsville, Staten Island, N. Y.
Vineyard Haven, Mass.	

NUMBER OF MARINE HOSPITALS

Mr. FOGARTY. How many marine hospitals have you?

Dr. HUNT. There are 21 hospitals of the 23 which were formerly known as marine hospitals; officially the name was changed last summer so they are all now known as Public Health Service hospitals; 21 of the group were known until last summer as marine hospitals.

HOSPITAL OCCUPANCY PERCENTAGE

Mr. FOGARTY. Are they all filled?

Dr. HUNT. They are running by and large about as full as they comfortably should, with the necessity for having some empty beds for emergencies. On the basis of constructed capacity, our hospitals are 94 percent occupied as of January 16, 1952.

Mr. FOGARTY. Ninety-four percent.

Dr. HUNT. That is with relation to the number of beds which should be set up in areas constructed for bed capacity, or for bed use, and in the proper numbers for each bed area. Actually, we have about 1,000 beds more than that set up. In some instances by crowding, in some instances by using areas which were not built for bed areas, such as solaria, sun porches, things of that sort. Our occupancy percentage on the basis of actual set-up beds was 84.7 percent.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Dr. HUNT. The total request was for $43,910,400, of which $36,747,000 was requested for direct appropriation.

NARCOTIC HOSPITAL OPERATIONS

Mr. FOGARTY. Are you still operating the two narcotic hospitals in Kentucky and Texas?

Dr. HUNT. Yes, sir.

Mr. FOGARTY. What is the situation there?

Dr. HUNT. The situation is somewhat less pressing than it was a year ago. We are not as crowded in the men's section, although we still do have a waiting list for female patients at Lexington.

Mr. FOGARTY. Drug addicts, you mean?

Dr. HUNT. Yes, sir.

Mr. FOGARTY. Young girls?

Dr. HUNT. Some of them are young. Some of them are not so young. The age distribution seems to have stabilized. We don't this year have the same startling increase in juvenile addicts that we were faced with a year ago.

Mr. FOGARTY. A year ago, wasn't that hospital practically filled with these girls?

Dr. HUNT. It was filled with a variety of ages and both sexes. A year ago Lexington Hospital was filled to capacity and beyond. The women's building has been filled for some time. I don't know exactly how long, but for several years anyway, and remains filled. We have still a waiting list for that group. The men's building, or the men's area, is not as crowded as it was a year ago.

Mr. FOGARTY. Do you think by that comparison, then, that the rise in drug addicts in the country has been stopped?

Dr. HUNT. We hope so. It is very difficult to be sure because at best we take care of only a fraction of the total number of drug addicts in the country and we do not know all the factors that are involved in getting patients with drug addiction to hospitals. Publicity, I am sure, is one factor, but we don't know how big a part it plays. The only thing we can be sure of is that the pressure on us is somewhat less severe this year than it was a year ago.

Mr. FOGARTY. What about the hospital at Fort Worth?

Dr. HUNT. The same general situation applies there. As you remember, we cut back the number of veterans in that hospital, beginning with the beginning of this fiscal year, to provide a larger space for our own beneficiaries, patients with narcotic addiction primarily. It now appears that we will not have to go too much farther with that; in other words, that we will be able to continue to take care of a certain number of veteran patients in that hospital. We won't have to cut them out altogether, as a year ago it looked as if we would have to do, but that hospital also is running at a reasonable level.

SAVINGS MADE BY CLOSING ELLIS ISLAND HOSPITAL

Mr. FOGARTY. Did you close any hospitals in the last year?

Dr. HUNT. No, sir.

Mr. FOGARTY. The year before?

Dr. HUNT. I beg your pardon. Last year, we did close Ellis Island, just a year ago now. The year before that was the year we didn't close any.

Mr. FOGARTY. When was the one at Ellis Island closed?

Dr. HUNT. The doors actually closed March 1, 1951. A year ago.

Mr. FOGARTY. Where has there been any savings in the budget because of closing that hospital?

Dr. HUNT. The savings mostly showed in reduced reimbursements in the fiscal year 1951. The primary reason for closing the hospital was that we were faced with a shortage of funds a year ago and we were able to get through the rest of the year primarily by closing Ellis Island, reducing employment in the other hospitals to a minor degree, but showing a reduction in positions between the 1952 base and the 1952 estimate of nearly 300—294.

Mr. FOGARTY. 294 positions less?

Dr. HUNT. Drop, between the 1952 base and the 1952 estimate.

Mr. STEPHENS. Mr. Chairman, I think in that connection you maybe already know, or the committee should know, that the savings because of closing Ellis Island were potential. The Government, the PHS, and this committee were faced with a stupendous maintenance or general overhauling job. The old place was actually about to fall down and everyone in the Government—I don't know, if any of the members of this committee saw it, maybe Judge McGrath—but it was a terribly old place. Like the two buildings or even worse than the two you are replacing at St. Elizabeths.

INCREASED COST OF MEDICAL SUPPLIES AND FOOD

Mr. FOGARTY. What about the cost of medical supplies and food?

Dr. HUNT. That cost is going up. It continues to rise. Food costs between the current fiscal year and next year go up from an average of 94, I believe—94.9 cents per day average ration cost, to 99.4 in 1953. That is an over-all average. The average for the general hospitals is slightly lower. The average for the TB hospitals is somewhat higher. For 1953, the average in the neuropsychiatric hospitals is 88 cents. In the general hospitals, $1; in the special hospitals, $1.24, and for all hospitals, employees and guests, $1. This works out to an over-all average of 99.4.

Mr. FOGARTY. What was your average a year ago?

Dr. HUNT. 94.9 during the current fiscal year.

Mr. FOGARTY. You still don't show any increase in the requested budget.

Dr. HUNT. I believe that the decrease in the number of rations served makes up for the increase in average cost so that the total cost remains about the same, but the unit cost goes up as we have said.

STEPS TAKEN TO CORRECT CONDITIONS AT CARVILLE HOSPITAL

Mr. FOGARTY. What about this hospital down in Carville? There were some complaints made a year ago about the conditions that existed there. Has anything been done to correct those conditions?

Dr. HUNT. We have done a rather full-scale study of the situation with the neuropsychiatric patients at that hospital. The first requirement, which is trained help to take care of them, we have already partially met. We have assigned an extra psychiatrist to the staff of our New Orleans hospital, and there is a psychiatrist at Carville on a visiting basis from our New Orleans hospital 3 days a week.

As to physical facilities, there have been two proposals which we have given careful study. One is a proposal to take one of the present dormitory units, which is a two-story structure, holding about 25 patients on each floor, and convert that into a neuropsychiatric hospital ward; one floor for men, one floor for women. That has some rather attractive features, one of them being that it could be done without quite such a large capital outlay. However, it would take a fair amount of money to put detention screens in all windows, to build the necessary stairways, locked doors, etc., and more important, it would take out of general circulation one whole unit for the over-all population. The population of the hospital has risen during the past year and is now running over 400. If we take one of these resident

units out of circulation and make an NP unit out of it, it is going to crowd the other patients.

The other proposal which our study group recommends is that we go to the Public Buildings Service and ask for a new building. That certainly would be the ideal arrangement, but this is 1952, and we may be forced—we certainly are being forced to continue with what we have got for the time being and we may be forced to compromise with a less than perfect answer in the next one, 2 or 3 years. Eventually, there is no doubt but that the hospital needs a new building, designed specifically to take care of neuropsychiatric patients. We have between 40 and 50 patients at the hospital now, with varying degrees of mental difficulties. Most of them are not serious. They can be taken care of with reasonable safety in the general hospital population, but some 5 years ago there was an assault by one of the psychotic patients on one of the Sisters doing nursing, and that sort of thing there is always a possibility. We do feel we have to have a better arrangement.

NUMBER OF OUT-PATIENT CLINICS

Mr. FOGARTY. How many outpatient clinics are there?

Dr. HUNT. There are 18 clinics which are staffed full time by our own people. In addition, there are over 100 places where we have arrangements with local practitioners to take care of our beneficiaries on a part-time basis.

Mr. FOGARTY. Will you put a list of those 18 in the record?

LIST OF USPHS OUTPATIENT CLINICS

Location	*Street address*
Balboa Heights, C. Z.	
Buffalo 3, N. Y.	227 Post Office Bldg.
Charleston 3, S. C.	Customhouse
Charlotte Amalie, V. I.	United States Post Office and Customhouse Bldg.
El Paso, Tex.	139 United States Courthouse
Honolulu 7, Hawaii	208 Federal Bldg.
Houston 11, Tex.	216 Appraisers Stores Bldg., 7300 Wingate Ave.
Los Angeles 12, Calif.	408 Federal Bldg.
Miami 3, Fla.	365 Federal Bldg.
New York 13, N. Y.	67 Hudson St.
Philadelphia 6, Pa.	225 Chestnut St.
Pittsburgh 19, Pa.	413 New Federal Bldg.
Port Arthur, Tex.	211 Federal Bldg.
Portland 5, Oreg.	220 United States Courthouse
San Diego 1, Calif.	208 New Post Office Bldg.
San Pedro, Calif.	308 Federal Bldg.
Tampa 1, Fla.	Box 1438, Davis Island
Washington 25, D. C.	4th and D Sts. SW.

DEFINITION OF HEALTH UNIT

Mr. FOGARTY. What is a health unit?

Dr. HUNT. Those are the first-aid rooms, except that we don't like to think of them just as first-aid rooms. I use that term so that you will recognize quickly what we are talking about. They are the rooms

in every major Government building where nurses, and in a few instances, doctors, are on duty to assist the employees in that building in their day-by-day health problems.

Now, they do not furnish any medical care. They do health counseling, they do first-aid work. If a person faints at a desk, or trips over something and falls, they are there for that kind of first aid. They do a rather large business on behalf of private doctors who ask the nurses in health units to do things for their patients which would otherwise require that the patient leave his job, and spend 1, 2, or 3 hours, going to the doctor's office. That is particularly true with relation to injections and that sort of thing, where the nurse can get a note from the doctor and get the material, whatever needs to be given the patient. Then the nurse, without taking the person off the job more than 10 minutes, can give the injection once a week, three times a week, or whatever is necessary. They do a good deal of that work.

REIMBURSEMENTS TO HEALTH UNITS

Mr. FOGARTY. Do you get reimbursed for any of that work?

Dr. HUNT. We get reimbursed for all of that except in our own two buildings. The health units in the Federal Security Buildings, North and South, are in this appropriation as direct cost. It is $7,000 for the two of them.

Mr. FOGARTY. What about these 81 positions? Where are they located? The figure shows on page 103 under the heading "Operation of health units."

Dr. HUNT. We have that breakdown. I will be glad to read it or supply it for the record. It is one- and two-person units, except at the Treasury Department.

NUMBER OF MEDICAL OFFICERS ASSIGNED TO COAST GUARD

Mr. FOGARTY. Now you have all in one place starting on page 104 the cost of medical services to Coast Guard, and there are 85 positions assigned there; is that right?

Dr. HUNT. That is cost of officers asigned to the Coast Guard for duty with their stations. This does not include cost of hospitalizing coast guardsmen in our own hospitals. That is thrown in as part of our general patient load estimate.

LOCATION OF COAST GUARD STATIONS

Mr. FOGARTY. But in all Coast Guard stations the cost of the medical officers are in this estimate here?

Dr. HUNT. That is correct. Would you like a breakdown of where they are assigned?

Mr. FOGARTY. Will you put that in the record?

(The information is as follows:)

Distribution of Public Health Service staff (physicians, dentists, nurses) assigned to the Coast Guard medical services, fiscal year 1953 estimate, hospitals and medical care appropriation

Total	90
U. S. Coast Guard Academy, New London, Conn	16
U. S. Coast Guard Receiving Center, Cape May N. J	7
U. S. Coast Guard Training Station, Groton, Conn	5
U. S. Coast Guard Headquarters, Washington, D. C	6
U. S. Coast Guard, Curtis Bay, Md	3
U. S. Coast Guard Base, Boston, Mass	3
U. S. Coast Guard, Ellis Island, N. Y	2
Second Coast Guard District, St. Louis, Mo	1
Third Coast Guard District, New York, N. Y	1
U. S. Coast Guard Base, Portsmouth, Va	1
Coast Guard Air Station, Elizabeth City, N. C	2
Seventh Coast Guard District, Miami, Fla	2
Coast Guard Air Station, St. Petersburg, Fla	1
Coast Guard Base, San Juan, P. R	1
Ninth Coast Guard District, Cleveland, Ohio	1
Eleventh Coast Guard District, Long Beach, Calif	1
Coast Guard Air Station, San Diego, Calif	1
Staff Commander, western area, San Francisco, Calif	6
Coast Guard Training Station, Alameda, Calif	7
Coast Guard Air Station, South San Francisco, Calif	1
Coast Guard Base, Seattle, Wash	1
Coast Guard Base Air Station, Port Angeles, Wash	2
Fourteenth Coast Guard District, Honolulu, T. H	2
6 motorized dental units (1–3, 9, 13, 7–8, 2–5, 11–12 district)	6
11 Coast Guard cutters	11

PERSONNEL ASSIGNED TO OPERATE HOSPITALS OF OTHER AGENCIES

Mr. FOGARTY. You have personnel detailed to other agencies. Would you explain that?

Dr. HUNT. That is made up of 88 people, 81 commissioned officers and 7 civil-service employees, of whom 65 are assigned to the Bureau of Indian Affairs, 6 to the Bureau of Employees' Compensation, 4 to the Coast and Geodetic Survey, 4 to the Office of Vocational Rehabilitation, 2 to the Fish and Wildlife Service, 1 to the Bureau of Animal Industry, 5 to the Immigration and Naturalization Service, and 1 to the Department of State.

Mr. FOGARTY. What are they used for?

Dr. HUNT. The 65 assigned to the Bureau of Indian Affairs are used almost entirely to operate the hospitals of the Indian Service, and, as you know, this is on a reimbursable basis. They are in this budget simply as a place to put them. This Division has no supervisory jurisdiction over them.

REASON FOR INCLUSION IN THIS BUDGET

Mr. FOGARTY. Why should it be in this budget?

Dr. HUNT. I think Mr. Harlow would answer that.

Mr. HARLOW. Generally speaking, Mr. Chairman, for the type of work they do, they come from our hospitals. They are taken out of the hospitals because they know—they are specialists in medical care, you might say, assigned to the Bureau of Indian Affairs to conduct their medical work; and, since it is a reimbursable proposition, we

pay them out of this fund and get reimbursed from the places to which they are detailed.

Mr. FOGARTY. They are permanent employees?

Mr. HARLOW. They are our employees; and, if the work dropped over there, we would take them back and find assignments for them; yes, sir.

Dr. MASUR. Mr. Chairman, they are professionally responsible to the Chief of the Bureau of Medical Services, sir.

Mr. FOGARTY. I can't understand, if they are employed on a permanent basis assigned to other agencies, why they shouldn't be carried in these other agencies' budgets and paid out of their funds.

Dr. HUNT. They are.

Mr. HARLOW. Actually, the amount is appropriated in their budget.

Mr. FOGARTY. You are paying this money out and then collecting?

Mr. HARLOW. Yes, sir.

There is another reason for that, too, I think, that we might mention. These people are career employees of the Public Health Service; and, if they are commissioned officers, that is worth something to them. If we put them on another payroll, the payroll of another Government agency, they lose their rights of continuity in the Public Health Service, for example, which we wouldn't want to see happen.

INDIVIDUALS NOT ON PERMANENT ASSIGNMENT TO PARTICULAR AGENCIES

Dr. HUNT. The individuals, Mr. Chairman, are not on a permanent assignment. The numbers may be the same year after year, although this is the first year that the Bureau of Indian Affairs has had money enough to have an establishment of this size, but the individual doctors are going to be pulled back into general circulation in the Public Health Service and other doctors assigned out, so that there is a mechanism there for giving them, the Indian Service, better service on the basis of short-term assignments of career officers of the Public Health Service; the same thing is true of the Bureau of Prisons.

Mr. SCHWABE. There is a lot of expense moving them back and forth with their families and their effects, though, isn't there?

Dr. HUNT. The assignments are not that short, really. There is a certain amount of movement in a corps of this size, anyway.

Mr. SCHWABE. There is bound to be.

Dr. HUNT. A commissioned corps of 2,000 people, such as the PHS has.

Mr. SCHWABE. This is that much more.

Dr. HUNT. I would say it fits into it. But the alternative, as far as we can see, is to do what they have done in the past when they have not, we are told, done a very good job for the Indians.

Mr. FOGARTY. Mr. Schwabe would know about that.

Mr. SCHWABE. The Bureau of Indian Affairs wouldn't agree with that, probably.

Dr. HUNT. I am speaking only of medical care.

Mr. SCHWABE. I know where these hospitals are, and I thought some of these people were direct employees of the Bureau of Indian Affairs.

Dr. HUNT. Some of them are.

Mr. SCHWABE. And the medical men as well, some of their doctors and their nurses, and so forth.

Dr. HUNT. That is right.

Mr. SCHWABE. They are not all lent by your department.

Dr. HUNT. That is right. Any reflections that I may have cast were not on the quality of work done by individuals, but simply on the number of individuals that they were able to get to do the total job.

Mr. SCHWABE. I think that they have a bit lower pay schedule than you do, do they not, and that is probably something that would work to their disadvantage in having direct employees in some of their hospitals.

Dr. HUNT. I believe the employees of the Bureau of Indian Affairs are on the regular civil-service schedule.

Mr. SCHWABE. That is right. And you have some on a higher schedule?

Dr. HUNT. Let's say different.

Mr. SCHWABE. Which you lend to them, so to speak?

Dr. HUNT. Part of the problem there is one of getting people who are willing to go off and spend a lifetime in some of the more isolated stations, let's say, in Arizona.

Mr. SCHWABE. I have been out there among them.

Dr. HUNT. Where there isn't much to look at.

Mr. SCHWABE. That is right.

Dr. HUNT. And this mechanism has given them, Dr. Foard tells us, a terrific boost.

Mr. SCHWABE. Some of the assignments in Alaska are probably comparable to the situation among the Navajos and Hopis, but those are probably the worst features connected with the service. I have noticed that differential in compensation, and the Bureau of Indian Affairs is inclined to complain at times that they can't keep up with you folks because they can't pay as good salaries.

Dr. MASUR. I think by the same token, sir, they will also tell you that they are now getting a better quality of medical care than they have ever had by virtue of the younger men.

Mr. SCHWABE. You get what you pay for.

Dr. MASUR. Also, younger men because they are on a rotational and career basis, and Dr. Foard reports they are exceedingly pleased with the medical services they have been able to render in the last year or two, particularly.

Mr. SCHWABE. That may be true. I hope it is. Excuse me for interrupting.

Mr. FOGARTY. Mr. Denton?

FURTHER REFERENCE TO CURTAILMENT OF REIMBURSABLE SERVICES

Mr. DENTON. I notice that the reimbursements for 1952 were $7,717,000 plus, and for 1953 they are $5,893,000 plus, which is a reduction of $1,824,000.

Dr. HUNT. That is right.

Mr. DENTON. Just what service has been curtailed in this large reduction?

Dr. HUNT. That is essentially a reduction in the number of veterans we will be taking care of.

As I said earlier, our own beneficiaries will be going up to some extent. There will be, to be sure, an over-all net drop among the hospitals as a whole.

The drop, however, is distributed among many, if not all, of the general hospitals.

Mr. DENTON. You mean from Immigration Service?

Dr. HUNT. Most of the drop is in veterans; Immigration load will go down a few, as I recall it, 10 or 20 or something of that sort. The other reimbursable groups will remain essentially the same. The big drop is in the veterans' group, and that will be distributed over many, if not all, of the general hospitals.

EFFECT OF REIMBURSEMENT DECLINE ON BUDGET ESTIMATE

Mr. DENTON. Where is that reduction reflected in the budget in decreased operating cost?

Dr. HUNT. It is very questionable as to whether there will be a greater drop in personnel cost than we have shown here, a drop of something over $500,000 in the operation of hospitals. You see, that in itself represents a drop in average employment of over 100 people.

Mr. DENTON. The personnel of your hospitals will drop how much, did you say?

Dr. HUNT. The average employment in the hospitals will drop from an average employment of 6,806 to 6,540.

Mr. DENTON. About 300?

Dr. HUNT. I beg your pardon, from 6,540 to 6,432; a drop of 108 in average employment in the hospitals.

Mr. DENTON. Is that reflected in the funds requested for personnel? I notice here that there is an over-all increase requested.

Dr. HUNT. The operation of the hospitals shows a decrease of $543,767, of which $385,000 is due to a decrease in average employment by this 108 figure that I just mentioned.

Mr. DENTON. You show an increase, on page 107A, of $1,400,000 plus for the pay increases.

Dr. HUNT. Yes, sir; that is the pay increase.

Mr. DENTON. Where is that decrease in personnel reflected? Is that in the operation of hospitals?

Dr. HUNT. It is shown in operation of hospitals; yes, sir.

Mr. DENTON. $543,000?

Dr. HUNT. Yes, sir.

Mr. HARLOW. You see what happens, Mr. Denton, is that as our reimbursable patients go out the free patients come in, and as they take the place of reimbursable patients the appropriation has to be increased.

Mr. DENTON. I don't understand the table. You have indicated there is a big decrease under operation of hospitals, but the table shows $1,800,000 increase in the operation of the hospitals down at the foot of page 107A. That is the one big item.

Dr. HUNT. Under reimbursements; yes. That is the factor that Mr. Harlow has just mentioned. Because the hospitals will be shifting from the reimbursable group of patients to a nonreimbursable group of patients, there will be necessary an increase in appropriated funds to make up for lost reimbursements.

FACTORS INVOLVING INCREASE IN DIRECT APPROPRIATION

Mr. DENTON. Why would there be an increase in those figures for direct appropriations?

Dr. HUNT. The increase in shipping and the almost 50-percent increase in Coast Guard are two of the major factors there. In addition there are more people working in arsenals, shipyards, and other places like that as Federal employees where they are in more or less dangerous occupations, so that we do anticipate a rise in the number of patients.

Mr. DENTON. Do you take care of people in arsenals and places like that?

Dr. HUNT. We take care of Federal employees hurt at work and most of those are Federal employees.

CONDITION OF HOSPITALS

Mr. DENTON. I want to ask you about the condition of hospitals, formerly marine hospitals. Are they still old hospitals like that one at Evansville?

Dr. HUNT. No; during the thirties there was rather an extensive building program and most of our hospital buildings were modernized at that time. We do have a few relics, but only a few. We have just within the past year done some rather important fireproofing at the hospital at Portland, Maine, for instance, which was an old brick building; it was not frame, but it was built many years ago with a terrifically high first floor ceiling and an open stairway. We have, within the past year, closed that stairway so as to reduce the fire hazard.

There are a few others, where the hospital buildings are not completely modern, but by and large, our hospitals now are reasonably modern, fireproof construction hospitals.

Mr. DENTON. Is that one in Louisville still in operation?

Dr. HUNT. No, sir. That was closed about 4 years ago.

Mr. DENTON. Are there any out in the Ohio Valley at all, now?

Dr. HUNT. We have no hospital in the Ohio Valley. We have one or two out-patient clinics.

GOVERNMENT HOSPITALS SERVE ALL SEAMEN

Mr. DENTON. Now, any riverman or any seaman is entitled if he gets sick to go to a Government hospital?

Dr. HUNT. That is right.

Mr. DENTON. Where do these rivermen go when they get sick?

Dr. HUNT. We still have hospitals at Kirkwood, just outside of St. Louis, and Memphis, in addition to a large hospital at New Orleans.

Mr. DENTON. They have to go that distance, though?

Dr. HUNT. From up the Ohio they would have to go down to Kirkwood.

Mr. DENTON. Has that always been the custom, that the Government took care of seamen in these Government hospitals when they were sick?

Dr. HUNT. It started in 1798.

Mr. DENTON. Is that an international custom? Do other nations do that?

Dr. HUNT. Our law was based upon an English law which dates back to the time of the Spanish Armada so that at least in Anglo-Saxon history there is a long precedent for this. There is a hospital still called the Dreadnaught Hospital in Greenwich, in London, which was not nationalized with other hospitals in Great Britain 4 years ago, and still serves the seamen of Great Britain.

REIMBURSEMENT FOR HOSPITALIZED FOREIGN SEAMEN

Mr. DENTON. This reimbursable amount you talk about from foreign countries, is that for foreign seamen who take sick here and are cared for in one of your hospitals?

Dr. HUNT. That is right.

Mr. DENTON. The country from which they come reimburses the Government?

Dr. HUNT. Normally it is the shipping company, but somebody, either the shipping company or the consul of the foreign government, assumes responsibility for the patient.

PAYMENT OF HOSPITAL SERVICE FOR AMERICAN SEAMEN IN FOREIGN COUNTRIES

Mr. DENTON. When our seamen get sick in Liverpool, or some place like that, does our Government pay for their hospitalization?

Dr. HUNT. No. As far as I know, that is entirely the responsibility of the shipping company, except that in Liverpool they will now be entitled to hospitalization like any other visitor to the British Isles.

Mr. DENTON. There has never been any movement to have the shipping companies pay for treatment given their employees under this appropriation has there? Or is that considered something the Government just gives?

Dr. HUNT. I don't know of any such movement, no, sir.

Mr. HARLOW. In the beginning, it was paid in the form of a tax on seamen's wages.

Mr. SCHWABE. Deductions were made each pay day out of their compensation, 25 cents in some instances and 50 cents in some?

Mr. HARLOW. Yes; then later on it was changed to a tonnage tax against the ships and then later it was switched over to complete Federal appropriation.

Mr. DENTON. I have heard those older rivermen for years talk about how they paid so much money for hospitalization. I remember last year I asked a doctor about it and he said he had heard that same thing, too, and had been trying to find it.

Dr. HUNT. Well, unless they were in active service before 1884, they haven't paid anything for the support of the marine or Public Health Service hospitals.

Mr. DENTON. I have seen them rather proud they could go to a hospital, because they paid for it as part of their wages.

Dr. HUNT. It is part of their wages, certainly, but they themselves do not contribute to the support of the hospitals.

There is some confusion in their minds and I think in the minds of a good many people because a number of the unions do have welfare

funds, some of which pay small sums to seamen while they are hospitalized, so that it is all mixed up in their minds, but actually, they, of course, do not pay anything to the hospitals.

REASON FOR DISCONTINUANCE OF MARINE HOSPITALS ALONG OHIO RIVER

Mr. DENTON. Why did you discontinue those marine hospitals on the Ohio River? You have more traffic there, now. More than you ever had before.

Dr. HUNT. There is more traffic but we understand that they are carrying it on with fewer men. I can speak with considerable feeling about Louisville, because I was stationed there during the war and even at that time, with shipping fairly active, our patient load was about 85 percent veterans, so that as soon as they opened the veterans hospital in Louisville it was completely uneconomic for us to try to continue a hospital there.

We have, as a matter of fact, arranged with the veterans' hospital to take care of our patients, if they need hospitalization, so that I should modify what I said a few minutes ago, to say that a seaman needing care in an emergency could be taken care of right in Louisville.

As a matter of fact, in any other town if it is a true emergency we will accept responsibility for it.

Mr. DENTON. Would you reimburse the hospital in that case?

Dr. HUNT. That is right.

Mr. SCHWABE. You have a contract relationship with many of them?

Dr. HUNT. Yes.

Mr. DENTON. I think that is all.

Mr. FOGARTY. Mr. Schwabe?

FURTHER REFERENCE TO GROUPS ELIGIBLE FOR GOVERNMENT HOSPITAL SERVICE

Mr. SCHWABE. Doctor, with reference to these seamen who are beneficiaries of your in-patient and out-patient hospitals, as I understand it, any seaman who can come in and show that he is actually engaged in merchant seamen's work, and having a certificate or credentials of some sort from the master of his ship, or somebody in authority, he can go to one of these hospitals, or seek comfort?

Dr. HUNT. Any active seaman.

Mr. SCHWABE. When you know he is classed as active.

Dr. HUNT. That is right.

Mr. SCHWABE. And then the Coast Guard, of course, have always been eligible under our hospitalization program that you head up here.

Dr. HUNT. Yes.

Mr. SCHWABE. There are a lot of other groups that have been added in recent years, such as civil-service employees and those Government workers injured in line of duty or while on duty, is not that generally true?

Dr. HUNT. Yes, although I would like to make it clear that civil-service employees as such are not eligible for treatment, but only those who are hurt at work.

Mr. SCHWABE. That is what I say, injured in line of duty; that is what I meant, including all Government industrial employees, such as you mentioned awhile ago?

Dr. HUNT. Under the same circumstances, yes, sir.

Mr. SCHWABE. Injured in line of duty or during performance of services?

Dr. HUNT. That is right.

IMMUNIZATION

Mr. SCHWABE. Then you also have as additional beneficiaries practically everybody in the Government service who comes into these centers for immunization. Is not that true?

Dr. HUNT. Immunization is rather a complex subject. We do do practically all of the immunization work as far as yellow fever is concerned.

Mr. SCHWABE. Throughout the United States?

Dr. HUNT. Yes, sir, because——

Mr. SCHWABE. Because of the nature of the serum that you have to take care of.

Dr. HUNT. The nature of the material.

In the case of other inoculations, such as ordinary vaccination, we do not do that ordinarily for Government employees except when they are going to be traveling on official orders to a place where they should be vaccinated. Then we will take care of them but we do not attempt—we would have no authority to attempt—to carry on an immunization program for Government employees as such.

Mr. SCHWABE. But wherever they are performing services or are requested to go on assignment to perform services in areas where it is deemed advisable for them to become immunized from any disease, then it is your province to immunize them; is it not?

Dr. HUNT. That is right.

Mr. SCHWABE. And those immunization programs are primarily conducted, therefore, and naturally, along east and west coasts?

Dr. HUNT. Those are the principal places.

Mr. SCHWABE. And you have others, of course. Wherever your installations are you can take care of them, right here in Washington or anywhere else, but primarily it is along the coast line; is that not right?

Dr. HUNT. That is right.

Mr. SCHWABE. Of course, most of your installations and employees are there anyway.

Dr. HUNT. Yes.

VARIATION IN SERVICES RENDERED

Mr. SCHWABE. In some of your installations you are more liberal, are you not, in the service that you render, both by groups and otherwise, than you are in other places? There is no general rule that is hard and fast on that, is there?

Dr. HUNT. There is no variation by design.

Mr. SCHWABE. But I have found that those in charge of these installations do vary considerably in an adaptation of the rules.

Dr. HUNT. It is very difficult to write instructions which will cover every circumstance and be interpreted the same way by 23 medical officers in charge, and I am sure that there is in fact a certain amount of variation.

Mr. SCHWABE. I assure you there is. I found that out.

Dr. HUNT. I am sure there is, too.

Mr. SCHWABE. In one place, they will perform certain service, and in exactly the same type of installation in the next place, they won't do it. I asked as I went along why that difference and they said "difference, perhaps, in the men in charge." That was about all that they could answer; the instructions they thought were uniform; is that correct?

Dr. HUNT. That is correct.

SERVICES RENDERED TO DEPENDENTS OF CERTAIN GROUPS

Mr. SCHWABE. Now, in connection with the service that you render, you have also to take care of dependents of certain of these groups whom you serve don't you?

Dr. HUNT. They are part of the group whom I didn't name.

Mr. SCHWABE. But you do not take care of the dependents of all of the groups that you mentioned?

Dr. HUNT. We take care, to the extent that facilities are available, of dependents of officers and men of the Coast Guard, officers of the Coast and Geodetic Survey, and officers of the PHS.

Mr. SCHWABE. And insofar as facilities will permit in some instances of other dependents; is that not correct?

Dr. HUNT. We do occasionally take care of dependents of the other armed services, the Army, and Navy particularly.

Mr. SCHWABE. Particularly Navy?

Dr. HUNT. Which is essentially a courtesy that is of border-line legality, possibly, but they are entitled to it in their own hospitals. If we have the facility we have on occasion taken care of them in the same way.

Mr. SCHWABE. You are not always reimbursed for every one of those items of service?

Dr. HUNT. That is correct.

Mr. SCHWABE. I might say, Mr. Chairman, that the questions I am asking are as a result of some of my investigations and visitations and I wasn't able to understand quite all of it and I thought the doctor, here, might clarify some of it and I think he is doing a good job of it so far as that is concerned.

Mr. FOGARTY. I am glad you are bringing up these points.

Mr. SCHWABE. With reference to the particular services that are rendered, they are pretty nearly everything within the scope of medical service, are they not?

Dr. HUNT. By and large; yes.

Mr. SCHWABE. For instance, your in-patient hospitals, such as the one at Brighton, about 20 miles out of Boston, and the large one at San Francisco, on Lake Street, and one at Seattle, et cetera, they take care of pretty nearly all types of bed patients that we find in hospitals, except where extreme specialization is needed; is that not correct?

Dr. HUNT. That is right. Those three hospitals have all of the principal types of medical service, except obstetrics and pediatrics.

SERVICE TO CHILDREN

Mr. SCHWABE. I was thinking I saw some children in one at San Francisco.

Dr. HUNT. You possibly did. We do take individual children occasionally, but we don't have enough of that type of patient to have an organized service.

Mr. SCHWABE. I see.

Dr. HUNT. We do, as a matter of fact, take care of a few children from time to time.

BED CAPACITY OF CERTAIN HOSPITALS

Now, the hospital at Brighton is one of your newest hospitals, isn't it? It's one of the most modern I was ever in.

Dr. HUNT. That is right.

Mr. SCHWABE. It is about 350- or 360-bed capacity, as I remember, isn't it?

Dr. HUNT. About that number of beds set up; yes, sir.

Mr. SCHWABE. The one at San Francisco you are now enlarging considerably, building a considerable addition in front of it?

Dr. HUNT. Yes, sir.

Mr. SCHWABE. It is about a hundred-bed capacity or larger, roughly speaking?

Dr. HUNT. It will figure out about that.

Mr. SCHWABE. The one at Seattle has been about the same for several years, has it not?

Dr. HUNT. Yes. That was opened in 1933 and has not changed since then.

WORK PERFORMED IN OUT-PATIENT HOSPITALS

Mr. SCHWABE. You have these large out-patient installations, or hospitals; one down in New York, on Hudson Street, is it?

Dr. HUNT. 67 Hudson Street.

Mr. SCHWABE. It is a very old building, but it is very active, so far as your patient load is concerned, I observed.

Dr. HUNT. It is literally a pre-Revolutionary building and is completely unsuitable for patient care, but we are doing the best we can and there is a very active service there.

DENTAL SERVICES

Mr. SCHWABE. In those out-patient hospitals, such as the one we are referring to now in New York, you do dental work. For instance, it seems to me there are something like 13 dental chairs, if I remember correctly, and 9 dentists, technicians, et cetera.

You do everything that a dentist would do in private practice ordinarily there. You furnish that; is that right?

Dr. HUNT. The degree of some types of work is much lower than it would be in private practice.

Mr. SCHWABE. That might be. I am not passing on the efficiency and quality.

Dr. HUNT. I am thinking only of the volume. We are unable to do very much work with bridges and that sort of thing. We do a certain amount.

Mr. SCHWABE. You do a lot of furnishing of false dentures and extraction work, and so on?

Dr. HUNT. For the most part it is either restorative dentistry; in other words, filling cavities, or making and furnishing of dentures.

ARTIFICIAL LIMBS

Mr. SCHWABE. And you also do a lot of work there in the way of furnishing artificial limbs, et cetera?

Dr. HUNT. A certain amount; yes, sir.

Mr. SCHWABE. Well, that is one of your departments of the service there?

Dr. HUNT. Yes, sir.

Mr. SCHWABE. And you find a great need for that, I dare say, among the group that constitutes your beneficiaries, or a portion of them?

Dr. HUNT. There is quite a need.

VENEREAL DISEASE

Mr. SCHWABE. And a lot of venereal-disease work there?

Dr. HUNT. Much less than formerly.

Mr. SCHWABE. Is that reducing there? It is all quick-treatment method now?

Dr. HUNT. Introduction of penicillin has made a terrific advance in the control and treatment of venereal diseases.

EYE, EAR, NOSE, AND THROAT

Mr. SCHWABE. With reference to eye, ear, nose, and throat, you do that work there, too, for those who do not have to be hospitalized?

Dr. HUNT. Yes.

Mr. SCHWABE. And yet you do not furnish glasses, as I understand it?

Dr. HUNT. Normally not.

Mr. SCHWABE. I understand that is about all you fail to furnish. That is what I was leading up to. You furnish these artificial limbs, do you not?

Dr. HUNT. Artificial limbs.

Mr. SCHWABE. Free of charge?

Dr. HUNT. To the seamen.

Mr. SCHWABE. To those who are rightful beneficiaries?

Dr. HUNT. To seamen, coast guardsmen, beneficiaries of the Bureau of Employees' Compensation; that is correct. We normally would look to the Veterans' Administration to furnish those things for their own beneficiaries.

Mr. SCHWABE. But you do furnish false dentures and you do furnish these artificial limbs and you do furnish all the medications to those legally your beneficiaries?

Dr. HUNT. Yes.

Mr. SCHWABE. And the treatment. That is correct, generally speaking, isn't it?

Dr. HUNT. That is correct.

Mr. SCHWABE. Of course, you are reimbursed on some of them if they are not legally your beneficiaries?

Dr. HUNT. Yes.

ELIGIBILITY OF SEAMEN DETERMINED BY REGISTRY OF VESSEL

Mr. SCHWABE. With reference to your opening remarks, about American seamen, of course, you didn't intend to limit it necessarily to those who are American citizens, did you?

Dr. HUNT. No, sir.

Mr. SCHWABE. You have no way of distinguishing, or your people do not, whether a man is a citizen of this country, and don't try to?

Dr. HUNT. It is the registry of the vessel that counts.

Mr. SCHWABE. I see. He identifies himself as a seamen. He gets treatment. That is what it amounts to, by and large, isn't it?

Dr. HUNT. That is correct.

NO REIMBURSEMENT FROM FOREIGN CITIZENS ON AMERICAN SHIPS

Mr. SCHWABE. And you get little or no reimbursement from those who are foreign citizens, isn't that true?

Dr. HUNT. We get no reimbursement from foreign citizens who are seamen on American ships. They are considered to be our beneficiaries without regard to citizenship.

Mr. SCHWABE. Citizens on foreign ships you treat, and if you can get reimbursement, you do it; is that right?

Dr. HUNT. I would say by and large we don't treat them unless we are assured of reimbursement. There are emergencies where that is not true, but by and large——

Mr. SCHWABE. I found there were, and probably as a humanitarian situation there should be. I am not critical of it.

Dr. HUNT. By and large we don't take them in unless we know who is footing the bill.

NUMBER OF LARGE IN-PATIENT HOSPITALS

Mr. SCHWABE. There are only three of these large in-patient hospitals; is that not correct?

Dr. HUNT. In-patient hospitals, sir?

Mr. SCHWABE. Yes; three of the large in-patient hospitals for the treatment of the groups that we are talking about right now.

Dr. HUNT. We have 18 general hospitals and all but three or four of those would be considered pretty good sized by most standards.

Mr. SCHWABE. Would you call the one at your installation in the Federal Building there at Los Angeles, for instance, an in-patient hospital?

Dr. HUNT. That is out-patient entirely.

Mr. SCHWABE. So at Portland, Oreg.?

Dr. HUNT. Portland, Oreg., is out-patient entirely.

Mr. SCHWABE. In those places, particularly in Portland, I notice you are enlarging considerably.

Dr. HUNT. The net increase in space will be just about one room, I think. They are rearranging space within the Federal Building.

Mr. SCHWABE. I walked all through it. I really thought it was that. You are expanding there somewhat anyhow?

Dr. HUNT. That is right.

Mr. SCHWABE. The general program is expanding pretty generally?

Dr. HUNT. The out-patient program is certainly under pressure.

Mr. SCHWABE. In Los Angeles you have one, and a branch at San Pedro, I believe.

Dr. HUNT. That is right.

EFFECT OF DECREASED VETERAN-PATIENT LOAD ON SPACE PROBLEM

Mr. SCHWABE. Now, I am wondering if Forth Worth in connection with the drug-addict establishment that you spoke of awhile ago, cannot take take care of considerable more patients after the veterans withdraw?

Dr. HUNT. The veteran load is leveling off at just over 200.

Mr. SCHWABE. You did have four or five hundred there?

Dr. HUNT. We have had 500 a couple of years ago and I have brought the load down to provide room for an expanding load of our own beneficiaries.

Mr. SCHWABE. But the number of your own beneficiaries has not expanded too much; has it?

Dr. HUNT. It has not.

REFERENCE TO HOSPITAL AT LEXINGTON, KY.

Mr. SCHWABE. Now, at Lexington, Ky., Dr. Vogel has been in charge as superintendent for several years, and is now on 2 years' leave to Paris or somewhere with the French Government; is he not?

Dr. HUNT. He is now in Paris. He left 2 weeks ago.

Mr. SCHWABE. Who is in charge there now?

Dr. HUNT. Dr. Kenneth W. Chapman.

Mr. SCHWABE. He was transferred from where?

Dr. HUNT. He has been Assistant Chief of the Division of Hospitals here in Washington, my assistant for some past number of months, and he has just gone to Lexington to take charge.

Dr. MASUR. Formerly executive officer.

Dr. HUNT. He has had previous experience at Lexington. He was there before he came to Washington.

PATIENT POPULATION

Mr. SCHWABE. I didn't know him. I wanted to identify for the record who was in charge there.

Now, you have a population out there currently of what, approximately? I am talking about Lexington now.

Dr. HUNT. There were 1,201 patients in the hospital January 16.

Mr. SCHWABE. You have had a little over 1,500 there; haven't you?

Dr. HUNT. We have had as high as 1,500.

NUMBER OF PATIENTS FROM FEDERAL PRISONS

Mr. SCHWABE. And your group there comes from the Federal prisons to the extent of perhaps approximately one-third of the patient load; does it not, roughly?

Dr. HUNT. On January 16 there were 771 prisoners——

Mr. SCHWABE. Approximately two-thirds then.

Dr. HUNT. 771 prisoners, 617 voluntaries at both hospitals with about 50 of the prisoners at Fort Worth.

Mr. SCHWABE. That was my next question, if you had any down there.

Dr. HUNT. We do, which means there are about 700 prisoners at Lexington.

Mr. SCHWABE. Approximately seven-twelfths then, at Lexington are prisoners?

Dr. HUNT. That is right.

ADDITIONAL JURISDICTION OF DRUG ADDICTS

Mr. SCHWABE. Now, you have worked out a much more satisfactory arrangement to avoid unnecessary repetition of returns of these addicts by having them go down and get a local court order so as to give you more complete jurisdiction of them, those who come in voluntarily. That is correct; isn't it?

Dr. HUNT. We do that with a certain number of the patients at Lexington; yes.

Mr. SCHWABE. That gives you a better opportunity to handle the situation than you used to have?

Dr. HUNT. Yes.

Mr. SCHWABE. Decided improvement; is it not?

Dr. HUNT. I should say so; yes.

STATISTICAL INFORMATION REGARDING DRUG-ADDICT PATIENTS

Mr. SCHWABE. Do you know approximately how many female patients you have there, percentagewise?

Dr. HUNT. It is a relatively small percentage, between 100 and 150 patients. I can get the exact figure if you wish.

Mr. SCHWABE. That is all right.

Do you know approximately the percentage of your patients there at Lexington who are Negroes?

Dr. HUNT. I don't think we have that figure. I think we could get it for you.

Mr. SCHWABE. If it isn't too much trouble, I would like to have that for the record; and also, if we can, the portions of the country from which they come, generally speaking.

I think I know, but I want it in the record from you as a witness here, you see.

(The information requested is as follows:)

Number of patients admitted for the treatment of narcotic addiction, by race and sex, Public Health Service Hospital, Lexington, Ky., July 1951, through December 1951

Race	Number admitted		
	Total	Male	Female
Total	1,683	1,367	316
White	1,109	871	238
Negro	477	399	78
Chinese	97	97	0

Now, then, you had a lot of trouble, you told us before, with reference to a new group, the marijuana smokers who went on barbital?

Dr. HUNT. Yes.

Mr. SCHWABE. And you spoke to us about youngsters in their later teens and early twenties when you were here before. Now, I observed and was told that that number has apparently decreased, temporarily at any rate.

Dr. HUNT. That seems to be the case.

Mr. SCHWABE. And that, perhaps, was a good omen; but you don't know yet whether to say you can depend upon it holding down or not. Is that correct?

Dr. HUNT. That is correct. We still don't know.

Mr. SCHWABE. In addition to the other statistics I have requested, please furnish a summary of the drug-addict admissions for a current period.

(The statistics referred to follow:)

Number of persons admitted for treatment of narcotic addiction, by State of residence, Public Health Service Hospital, Lexington, Ky., July 1951 through December 1951

States from which admitted	Number admitted			States from which admitted	Number admitted		
	Total	Male	Female		Total	Male	Female
Total	1,683	1,367	316	Montana	0	0	0
				Nebraska	1	1	0
Alabama	62	48	14	Nevada	1	1	0
Arizona	3	1	2	New Hampshire	0	0	0
Arkansas	6	3	3	New Jersey	20	15	5
California	17	13	4	New Mexico	2	1	1
Colorado	3	2	1	New York	415	364	51
Connecticut	9	8	1	North Carolinea	71	63	8
Delaware	0	0	0	North Dakota	3	2	1
District of Columbia	105	95	10	Ohio	128	106	22
Florida	32	21	11	Oklahoma	9	4	5
Georgia	57	41	16	Oregon	2	0	2
Idaho	5	5	0	Pennsylvania	55	46	9
Illinois	177	150	27	Rhode Island	0	0	0
Indiana	38	31	7	South Carolina	39	31	8
Iowa	3	3	0	South Dakota	0	0	0
Kansas	3	1	2	Tennessee	58	44	14
Kentucky	65	53	12	Texas	36	13	23
Louisiana	29	16	13	Utah	1	1	0
Maine	3	2	1	Vermont	1	0	1
Maryland	21	18	3	Virginia	33	29	4
Massachusetts	23	19	4	Washington	5	3	2
Michigan	65	54	11	West Virginia	24	15	9
Minnesota	4	4	0	Wisconsin	7	5	2
Mississippi	13	11	2	Wyoming	1	1	0
Missouri	22	19	3	Puerto Rico	6	4	2

Mr. SCHWABE. When these people are through with their treatments there, you haven't yet worked out a satisfactory system of keeping checks on them and their lives afterward; have you?

Dr. HUNT. We are attempting to start—we have started—let me put it that way—a small pilot program of that sort to see what we can do.

Mr. SCHWABE. That is by encouraging them to report in by letter or otherwise; is it not?

Dr. HUNT. We feel that we will have to do it on a direct-visit basis.

Mr. SCHWABE. Which means the employment of a lot more people naturally to go and find these people in their new locations?

Dr. HUNT. It would mean the establishment of field teams to follow up on the patients. We don't know how many people it would take in a city like New York or a city like Chicago. I am perfectly sure that we will never be able to do it for every patient who leaves the hospital, because they come from all over the country. I do think, however, that if we can find out in the next 5 or 10 years what happens to the patients who leave the hospital and go back into one city, New York——

Mr. SCHWABE. Spot checking, so to speak?

Dr. HUNT. We will know a great deal more than we know now about the natural history of drug addiction.

Mr. SCHWABE. Is the Addicts Anonymous organization growing in popularity and numbers?

Dr. HUNT. There is an organization at the hospital. I don't know whether it is growing.

Mr. SCHWABE. There is one at Lexington?

Mr. HUNT. Yes.

Mr. SCHWABE. There is one at some other point, I believe, in Kentucky, too, where some of them drift after they leave the institution.

Dr. HUNT. Very probably.

Mr. SCHWABE. That is comparatively new, is it not, in its organization and operation?

Dr. HUNT. That is right.

Mr. SCHWABE. It will take a little time to know just how effective that may become?

Dr. HUNT. Exactly.

Mr. SCHWABE. Do you know the percentage of the patient load there which is composed of physicians, men who are practicing physicians?

Dr. HUNT. I have no figures on that at the moment. There, again, we could probably get them.

Mr. SCHWABE. I understood it was about 5 percent, roughly.

Dr. HUNT. I have heard it said that at times it was as high as 5 percent.

Mr. SCHWABE. And that those replacements are about 5 percent nurses?

Dr. HUNT. I believe that is correct also.

STEPS TO REDUCE COST OF HOSPITAL OPERATION

Mr. SCHWABE. Is there not something that could be done through the medical profession that you can think of that might relieve the taxpayers in institutions of this sort of some of the load, or has that ever been worked upon?

Dr. HUNT. I should say, Mr. Schwabe, that is one of the things that we hope to find out, whether there is a more effective and less expensive way of treating these people than to put them into a hospital for 4 to 6 months. At the moment we don't know of a better way.

FARM OPERATION AT LEXINGTON

Mr. SCHWABE. Can you report as to whether the farm out there, especially with reference to their production of cattle and hogs, is being operated profitably or at a loss?

Dr. HUNT. It is being operated profitably in the sense that the working capital fund which was set up 15 years ago, or 17 years ago, when the hospital was opened, has increased from $100,000 to $459,000.

Mr. SCHWABE. Of course, a lot of that is due to the increase in the value of livestock?

Dr. HUNT. That could well be. The net income in the fiscal year 1951 of all the industries was $12,000.

Mr. SCHWABE. That includes the making of garments and certain other material?

Dr. HUNT. There is a garment factory, plus the furniture factory and the farm.

Mr. SCHWABE. My judgment is that you are justified in keeping this program. I think you are furnishing about all of the pork and beef that is used there; is that not true?

Dr. HUNT. I believe so. I don't know what the exact percentage is.

Mr. SCHWABE. I was impressed with the management in that part of the establishment as well as the garment and furniture factory and I wanted to get some of the results in the record. I didn't see the figures on it.

I think that is all, Mr. Chairman.

Mr. FOGARTY. Thank you very much, Doctor.

FOREIGN QUARANTINE SERVICE

WITNESSES

DR. CALVIN B. SPENCER, CHIEF, DIVISION OF FOREIGN QUARANTINE

ROY L. HARLOW, CHIEF FINANCE OFFICER

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$3,004,000	$2,900,000	$3,063,000
Proposed supplemental due to pay increases		156,000	
Total available for obligation	3,004,000	3,056,000	3,063,000
Unobligated balance, estimated savings	−21,244		
Obligations incurred	2,982,756	3,056,000	3,063,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Medical examination of aliens and quarantine inspection of persons, vessels, and aircraft entering United States ports	$2,505,532	$2,572,300	$2,579,300
2. Medical examination of visa applicants in foreign countries	319,376	319,700	319,700
3. Administration	157,848	164,000	164,000
Obligations incurred	2,982,756	3,056,000	3,063,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	623	603	603
Full-time equivalent of all other positions	31	32	32
Average number of all employees	619	588	588
Average salaries and grades:			
General schedule grades:			
Average salary	$3,943	$4,411	$4,424
Average grade	GS–6.4	GS–6.4	GS–6.4
Crafts, protective, and custodial grades:			
Average salary	$3,325	$3,581	$3,553
Average grade	CPC–6.9	CPC–6.1	CPC–6.1
Ungraded positions: Average salary	$2,928	$2,855	$2,855
01 Personal services:			
Permanent positions	$2,390,762	$2,458,874	$2,458,874
Part-time and temporary positions	156,361	170,500	170,500
Regular pay in excess of 52-week base		9,185	9,185
Payment above basic rates	117,227	113,941	120,778
Total personal services	2,664,350	2,752,500	2,759,337
02 Travel	49,075	52,000	52,000
03 Transportation of things	22,895	23,000	23,000
04 Communication services	16,998	17,000	17,000
05 Rents and utility services	44,418	44,600	44,600
06 Printing and reproduction	2,833	3,000	3,000
07 Other contractual services	42,743	40,800	40,800
08 Supplies and materials	115,677	115,000	115,000
09 Equipment	65,092	45,000	45,000
10 Taxes and assessments	835	1,700	1,863
Subtotal	3,024,916	3,094,600	3,101,600
Deduct charges for quarters and subsistence	42,160	38,600	38,600
Obligations incurred	2,982,756	3,056,000	3,063,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$421,553	$404,823	$284,360
Obligations incurred during the year	2,982,756	3,056,000	3,063,000
	3,404,309	3,460,823	3,347,360
Deduct:			
Unliquidated obligations, end of year	404,823	284,360	288,000
Adjustment in obligations of prior years	17,375		
Obligated balance carried to certified claims account	14,626		
Total expenditures	2,967,485	3,176,463	3,059,360
Expenditures are distributed as follows:			
Out of current authorizations	2,702,820	2,625,000	2,775,000
Out of prior authorizations	264,665	404,823	275,000
Out of anticipated 1952 supplemental for pay increases		146,640	9,360

Mr. FOGARTY. Dr. Spencer, you are here to justify the requested appropriations for the foreign quarantine service?

Dr. SPENCER. Yes, sir.

Mr. FOGARTY. This is your first appearance before this committee; is that correct?

Dr. SPENCER. That is correct.

Mr. FOGARTY. Will you tell us for the record something concerning your background?

Dr. SPENCER. My last detail was as chief quarantine officer for the port of New York.

Mr. FOGARTY. How long have you been in the service?

Dr. SPENCER. Approximately 23 years.

Mr. FOGARTY. Most of it in the quarantine service?

Dr. SPENCER. Since 1935, sir.

Mr. FOGARTY. What happened to Dr. Dunnahoo?

Dr. SPENCER. He has been transferred to the region headquarters in San Francisco in charge of the medical facilities program.

Mr. FOGARTY. Do you have a statement for the committee, Doctor?

Dr. SPENCER. I have no prepared statement.

Mr. FOGARTY. Will you give us the background of the work you have been doing and what your program is for 1953?

GENERAL STATEMENT

Dr. SPENCER. Yes, sir. With your permission, I will attempt to give you a description of the operation of the division.

OPERATIONAL PROGRAM

The operational program of the Foreign Quarantine Division is divided into two functions: First, that of foreign quarantine, which, as its name implies, is that of the prevention of introduction of epidemic disease into the United States, its Territories, and possessions, particularly in reference to the quarantinable diseases, smallpox, plague, cholera, typhus, and yellow fever.

This is accomplished through the inspection of persons, vessels, aircraft, and other types of vehicles that might be used in international commerce, and a continuing rodent-control program, which is applied primarily to vessels, occasionally to aircraft; a continuing insect-control program which is applied to aircraft primarily and occasionally to ships, and on and around airports.

The second function is that of the medical examination of aliens in cooperation with the Immigration and Naturalization Service. This starts with an examination of visa applicants abroad, at consulates of the United States, and also encompasses the examination of all arriving aliens at ports of entry in the United States, or possessions.

Both phases of this quarantine program are long-established functions with the Public Health Service and the Government. From an epidemiological standpoint all of the major countries, with the exception of the United States and Canada, are potentially infected with smallpox. Plague is widespread in Africa, Asia, South America. Cholera is prevalent in southeast Asia. Typhus fever is present in practically all major countries, with the exception, again, of the United States and Canada, and yellow fever is most prevalent in South America and has had a recent spread—perhaps you have noted—through the Isthmus of Panama up into Central America. It also has a certain known incidence in the equatorial Africa.

EFFICIENCY OF QUARANTINE PROGRAM

The United States, by its freedom from ravages of pestilential diseases, occupies a rather preferential position compared with other countries that are repeatedly ravaged by the extensions of these quarantinable or epidemic diseases and this attests rather of the efficiency of the quarantine program as it is operating here.

Another evidence perhaps of the recognized efficiency, we might say, of the quarantine program is the fact that we in the Quarantine Division have been called upon from time to time to train representatives of the health departments, or the health ministries of other countries, especially in recent years. They have apparently seen particular reason to come and absorb some of our techniques that have been found effective.

The valuation, then, of the quarantine control is rather a tangible thing and readily observed. From the standpoint of the evaluation of the program of medical examination of aliens, by the exclusion of aliens who are afflicted with tuberculosis or loathesome or dangerous contagious diseases we feel we are preventing an immediate impact on the economy of the country through the need for medical care which would arise if they were allowed to come in. More far-reaching, and perhaps a little bit less able to evaluate tangibly, is the effect on this or succeeding generations of a possible intrusion or infiltration into the population of the mentally defective, which we are also excluding.

NUMBER OF FIELD STATIONS

The whole program then, of this Division, operating under this appropriation, is administered by a limited headquarters staff through approximately 282 field stations and other points of coverage throughout the world. The field stations will vary in size from the largest, which is located at New York, and completely equipped and staffed to do any phase of the quarantine activity, including the various phases of the medical examination of aliens, down to the smaller border-crossing points, which are staffed perhaps by a single contract or part-time physician located locally, and who is available on call as the need arises.

A number of these small points, or smaller quarantine stations on the coasts are supervised or covered by personnel from the larger stations that are responsible for their supervision.

Obviously then with the restricted staffing which we have in various areas the program will not permit a further reduction, if effective quarantine activities and controls are to be maintained.

The Division has at the present time the lowest personnel complement in many years and is called upon to cope with the constant and ever-increasing workload.

We might for the record indicate some of the workload.

INCREASED WORKLOAD

Mr. FOGARTY. There are two tables on page 90 of the committee print. Is that the workload data you had in mind?

Dr. SPENCER. Yes, sir.

Mr. FOGARTY. I will have those two tables put in the record at this point.

(The tables referred to are as follows:)

BASIC WORKLOAD DATA

1. Medical examination of aliens and quarantine inspection

	1951 actual	1952 estimate	1953 estimate
Examinations of aliens	1,428,639	1,446,000	1,446,000
Medical certifications	50,662	49,000	49,000
Aircraft and vessels arrivals	68,379	71,250	71,250
Aircraft and vessels treated	9,144	11,100	11,100
Quarantine inspections	31,695,396	31,488,000	31,488,000
Persons treated	315,912	409,000	409,000

2. Medical examination of visa applicants in foreign countries

	1951 actual	1952 estimate	1953 estimate
Total examinations	81,206	112,920	112,920
Medical notifications	23,664	33,100	33,100

Dr. SPENCER. I merely wanted to refer to the last year of experience we have had in this situation, as a matter of indicating the approximate amount of work which is going on.

The estimate for the fiscal year 1953 does not contemplate the inclusion of new programs or increase in program activities, even though perhaps experience might indicate to the contrary.

FACTORS CONTRIBUTING TO INCREASED WORKLOAD

Mr. FOGARTY. Does your experience indicate you are going to have a larger workload in 1952?

Dr. SPENCER. Taking into consideration the last several years, we might project that there is an increase to be expected. However, that is a very difficult thing to evaluate.

The functions supported by this appropriation must be matched against these work demands and of course the work demands are imposed by the amount of air traffic or shipping in general, by the numbers of border crossers, aliens coming into this country from other areas, and we have no possible control in the way of limiting this, except of course to try to meet the demand through our available personnel and appropriation.

It is also evidence then that there is no logical reason for gearing the service for a decrease in workload in view of our experience in the last several years.

With your permission, sir, I would like to introduce a chart indicating some of the increases that have occurred in the last 10 years.

Mr. FOGARTY. It is difficult to print a chart in the record. I see you have in tabular form that shows this trend for the last 5 years. Do you think that would serve about the same purpose?

Dr. SPENCER. Yes, sir.

(The information referred to follows:)

FOREIGN QUARANTINE SERVICE

5-year budgeted positions and average employment

Fiscal year	Total full-time position budget	Full-time average employment budget	Number of contracts	Number of part-time and per diem	Full-time equivalent of contract part-time and per diem	Average number of all employees
1949	652	627	228	34	33	660
1950	650	633	228	34	32	665
1951	623	588	228	34	31	619
1952	603	556	228	33	32	588
1953	603	556	228	33	32	588

5-year work trend of important factors

	1949	1950	1951	1952 (estimate) [1]	1953 (estimate) [1]
Vessels inspected	24,209	22,389	25,343	28,756	28,756
Persons on vessels inspected	1,514,179	1,518,345	1,509,045	2,062,986	2,062,986
Airplanes inspected	47,113	39,921	43,036	45,270	45,270
Persons on airplanes inspected	968,895	517,276	616,515	711,464	711,464
Mexican border inspections	23,956,470	28,037,060	29,569,836	32,540,070	32,540,070
Aliens medically inspected	1,410,310	1,330,622	1,428,639	1,632,658	1,632,658
Visa applicants examined (abroad)	79,966	89,229	81,206	109,968	109,968
Vaccinations at ports of entry	117,469	207,419	266,422	230,866	230,866

[1] Based on actual workload for period July 1 through Dec. 31, 1951.

Dr. SPENCER. This type of chart, which is a bar diagram giving quantitative description of the workload, is a comparison of the workload and personnel, workload in relation to personnel it should be, of the Division of Foreign Quarantine, fiscal years, 1941 as a comparison year, and 1951.

Mr. FOGARTY. You mean you had the same number of personnel in 1941 as you had in 1951?

Dr. SPENCER. No, sir; that will be shown down here. We are coming down through the workload period to show relationship to personnel. In the upper left you will notice the maritime inspection with respect to vessels indicates approximately 12,500 for 1941, whereas in 1951 it has more than doubled.

INCREASED NUMBER OF PERSONS EXAMINED SINCE 1941

Persons examined, carried on vessels. That would be a crew, passengers, United States and aliens, all categories, in 1941 was approximately 1 million—whereas in 1951 it was about 1.5 million.

Now, in aircraft inspection the numbers of planes that were inspected in 1941 were approximately 7,000 whereas in 1951 they have gone to approximately 44,000, whereas the personnel that was carried, that is, crew, passengers, all categories, 1941, was approximately 110,000; 1951 it exceeds 600,000.

Mexican border inspections have also increased during that period. The local crossers, as well as the permanent entries, all classes of aliens coming back and forth, in 1941 was slightly in excess of 10 million, whereas in 1951, approximately 30 million. It has almost trebled.

In the program of medical examination of aliens, those examined on arrival in the United States in 1941 were somewhere around 800,000, whereas in 1951 they ran about 1.4 million.

The visa applicants abroad have likewise increased. In 1941 it was almost 50,000; in 1951 it exceeds 80,000.

DECREASED PERSONNEL STAFF SINCE 1941

Now, in relationship to this great increase in workload, we had a personnel staff at this time of approximately 919, as I recall it.

Mr. FOGARTY. 919?

Dr. SPENCER. I believe that is correct. Nine hundred and nineteen, whereas in 1951 it ran somewhere in the neighborhood of ——— in 1951 it went to 845, and projected into 1952, was 815, so that then the total evaluation of this situation is that our workload in some cases doubled, in some cases trebled during this 10-year period. Whereas, we have had an actual decrease in personnel from around 919 down to 815.

EXPLANATION OF REQUEST FOR AUTOMOBILES

Mr. FOGARTY. Dr. Spencer, you are asking for quite a number of cars this year. You are asking for 10?

Dr. SPENCER. Yes, sir.

Mr. FOGARTY. Of which five shall be for replacement. That means you are asking for five new cars.

Dr. SPENCER. Yes, sir.

Mr. FOGARTY. What is the story on that?

Dr. SPENCER. The reason for part of it is apparent behind the operation that is shown on this chart. Taking advantage of recent advances, and knowledge of what may be done in control of disease, we have also taken into consideration the geographic concentration of piers and pier areas in certain ports, together with better in-job training of personnel for more efficiency. We have swung over then from an isolation type of quarantine in certain areas permitting it, that is, where we were boarding at anchorage, by launch, and from island quarantine stations, or perhaps isolated quarantine stations, to a case of bringing the office into the port areas and doing away with launch boarding where possible, and using more automotive transportation to get our personnel to the piers for the purpose of doing the inspections.

Mr. FOGARTY. How would this amendment that was tacked on to the appropriation bill of last year affect you people?

Dr. SPENCER. In view of this program, sir, and the change-over in the type of inspectional service which we are trying to effect in certain areas, it is going to be very adverse; it is a case of trying to meet the traffic with not enough vehicles to take our people.

Mr. FOGARTY. Mr. Schwabe?

FACTORS LIMITING INTENSITY OF QUARANTINE EXAMINATIONS

Mr. SCHWABE. Doctor, so far as the service is concerned, it is a physical impossibility, is it not, for your group of employees to examine every person and every vessel and every aircraft that comes to this country, and do it thoroughly; is that not right?

Dr. SPENCER. That is correct.

Mr. SCHWABE. You only spot-check, more or less; isn't that true?

Dr. SPENCER. In the case of examination of ships and aircraft we do a rather thorough inspection there. In the case of the inspection of personnel carried, passengers or crew, the bulk that are encountered does aggravate that very situation. That is, it is practically impossible to give a thorough examination to each one. However, it is possible to see them, see if there is any outward evidence of disease——

Mr. SCHWABE. And wherever that appears then, of course, you attempt——

Dr. SPENCER. A more intensive examination is then made.

Mr. SCHWABE. That is true on the border, and it is also true at ports of entry, is it not?

Dr. SPENCER. It is more true at the ports of entry than at the border.

Mr. SCHWABE. You have a greater number to deal with there?

Dr. SPENCER. That is right.

SOURCES OF ASSISTANCE TO QUARANTINE OFFICERS

Mr. SCHWABE. And you have your quarantine officers there, and a great many of those who operate the means of transportation render you a lot of assistance and cooperation; is that not true?

Dr. SPENCER. In scheduling and providing passenger-service people, interpreters, and various other services.

Mr. SCHWABE. And also pointing out anything that might excite your attention and curiosity to the point where your men would think that special examination is suggested?

Dr. SPENCER. That is right. That is particularly correct with respect to aircraft or vessels because the captain of the aircraft or vessel has the responsibility of notifying of any adverse condition or evidence of disease that may have occurred during that travel.

Mr. SCHWABE. Of course, while I think on the whole that quarantine service has done a great work for the country, it would take an army to do all of this thoroughly, and you can only at best do a hit-and-miss job of it?

Dr. SPENCER. That is what we feel, except, as we do have our suspicions excited by outward evidence, then we have a chance to pull those people aside and really do an intensive examination on them.

QUARANTINE SERVICE PRIMARILY AT PORT OF ENTRY

Mr. SCHWABE. I have wondered, now, when an airplane, passenger plane, leaves some foreign country and starts this way, where you begin to work, if at all.

Dr. SPENCER. Well, sir, as I inferred in that earlier remark about the responsibility of the captain of the plane or captain of the ship—

Mr. SCHWABE. That is this end of the line that you start?

Dr. SPENCER. Yes, sir.

Mr. SCHWABE. You don't have anybody at the main ports?

Dr. SPENCER. Of debarkation, or departure?

Mr. SCHWABE. Foreign embarkation ports.

Dr. SPENCER. No, sir.

Mr. SCHWABE. Your work is here?

Dr. SPENCER. Our work begins primarily in the port of entry except that we do get messages from these people occasionally notifying us so we can be set up to receive the situation or that we can give them some information back which may assist by the time the ship or plane arrives in our handling port.

Mr. SCHWABE. And the same thing is true with reference to seagoing vessels?

Dr. SPENCER. Yes, sir.

Mr. SCHWABE. It just seemed to me it would be impossible for you to make any thorough examination of every ship or plane that comes this way.

Dr. SPENCER. Yes, sir; that is correct. We are able to do a much better job in the larger places, where we are well staffed for it, than we are in the smaller ones where we are dependent upon limited personnel or part-time personnel.

Mr. SCHWABE. And where you may not get advance information or be alerted?

Dr. SPENCER. That is right.

Mr. SCHWABE. That is all.

AMOUNT OF BUDGET REQUEST

Mr. FOGARTY. Doctor, you will have $3,056,000 available in 1952, including a proposed supplemental of $156,000. In 1953 you are asking for $3,063,000, which is an increase of $7,000. The number of positions remain the same at 603.

Dr. SPENCER. Exactly.

Mr. FOGARTY. Do you have any further statement, Doctor?

Dr. SPENCER. No, sir; except that, of course, we are, as Mr. Schwabe brought out, unable to do a 100-percent examination program with the limitation in personnel. We feel that while we can do a practical job, perhaps, with this, it does limit us to a certain extent.

Mr. FOGARTY. Thank you very much, Doctor.

THURSDAY, JANUARY 31, 1952.

NATIONAL INSTITUTES OF HEALTH

WITNESSES

DR. WILLIAM H. SEBRELL, JR., DIRECTOR
DR. NORMAN H. TOPPING, ASSOCIATE DIRECTOR
DR. DAVID E. PRICE, ASSOCIATE DIRECTOR
DR. VICTOR H. HAAS, DIRECTOR, NATIONAL MICROBIOLOGICAL INSTITUTE
DR. PEARCE BAILEY, DIRECTOR, NATIONAL INSTITUTE OF NEUROLOGY AND BLINDNESS
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

OPERATING EXPENSES

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$14,313,900	$15,500,000	$16,876,000
Proposed supplemental due to pay increases		306,000	
Reimbursements from other accounts	1,819,077	2,304,000	3,325,900
Total available for obligation	16,132,977	18,110,000	20,201,900
Unobligated balance, estimated savings	−108,017		
Obligations incurred	16,024,960	18,110,000	20,201,900
Comparative transfer to "Salaries, expenses, and grants, National Heart Institute, Public Health Service"	−200,000		
Total obligations	15,824,960	18,110,000	20,201,900

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct obligations			
1. Grants for research and training:			
(a) Research projects	$7,500,542	$8,615,000	$8,600,000
(b) Research fellowships	531,320	649,000	649,000
(c) Training stipends		86,000	86,000
2. Direct operations:			
(a) Research	5,230,841	5,612,860	6,697,520
(b) Other direct operations:			
(1) Review and approval of research and training grants	515,941	618,480	618,480
(2) Administration	227,239	224,660	225,000
Total direct obligations	14,005,883	15,806,000	16,876,000
Obligations payable out of reimbursements from other accounts			
2. Direct operations:			
(a) Research	1,349,739	1,760,200	2,782,100
(b) Other direct operations:			
(1) Review and approval of research and training grants	6,871		
(2) Administration	462,467	543,800	543,800
Total obligations payable out of reimbursements from other accounts	1,819,077	2,304,000	3,325,900
Total obligations	15,824,960	18,110,000	20,201,900

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
PUBLIC HEALTH SERVICE			
Summary of personal services			
Total number of permanent positions	1,536	1,633	2,0
Full-time equivalent of all other positions	11	10	
Average number of all employees	1,405	1,507	1,8
Average salaries and grades:			
General schedule grades:			
Average salary	$3,880	$4,357	$4,1
Average grade	GS–5.8	GS–5.9	GS–6
Crafts, protective, and custodial grades:			
Average salary	$2,704	$3,047	$2,9
Average grade	CPC–4.0	CPC–4.1	CPC–4
Ungraded positions: Average salary	$4,305	$6,479	$7,8
Personal service obligations:			
Permanent positions	5,438,008	6,550,226	8,123,9
Part-time and temporary positions	41,584	43,780	47,2
Regular pay in excess of 52-week base		22,889	36,1
Payment above basic rates	105,731	99,585	125,0
Total personal service obligations	5,585,323	6,716,480	8,332,7
Direct obligations			
01 Personal services	4,394,606	5,139,020	5,968,9
02 Travel	107,712	119,500	135,5
03 Transportation of things	21,052	17,100	21,7
04 Communication services	41,960	42,950	55,4
05 Rents and utility services	74,854	74,600	109,2
06 Printing and reproduction	33,133	38,700	44,5
07 Other contractual services	79,694	54,650	111,7
08 Supplies and materials	726,529	709,300	869,9
09 Equipment	295,476	269,700	245,0
10 Lands and structures	32,959		
11 Grants, subsidies, and contributions	8,031,862	9,350,000	9,335,0
13 Refunds, awards, and indemnities	618		
15 Taxes and assessments	4,166	6,800	14,1
Subtotal	13,844,621	15,822,320	16,910,8
Deduct charges for quarters and subsistence	12,617	16,320	34,8
Total direct obligations	13,832,004	15,806,000	16,876,0
Obligations payable out of reimbursements from other accounts			
01 Personal services	1,190,717	1,577,460	2,363,7
02 Travel	8,335	24,750	27,0
03 Transportation of things	1,381	8,300	10,9
04 Communication services	17,008	18,900	34,7
05 Rents and utility services	55,650	58,000	101,4
06 Printing and reproduction	18,673	21,500	29,1
07 Other contractual services	49,240	58,800	54,6
08 Supplies and materials	346,054	394,190	578,2
09 Equipment	131,269	140,200	115,5
15 Taxes and assessments	750	1,900	10,5
Total obligations payable out of reimbursements from other accounts	1,819,077	2,304,000	3,325,9
Total obligations	15,651,081	18,110,000	20,201,9
ALLOCATION TO DEPARTMENT OF AGRICULTURE			
Total number of permanent positions	30		
Full-time equivalent of all other positions	1		
Average number of all employees	18		
Average salaries and grades:			
General schedule grades:			
Average salary	$4,059		
Average grade	GS–6.9		
Crafts, protective, and custodial grades:			
Average salary	$2,120		
Average grade	CPC–2.0		
Ungraded positions:			
Average salary	$2,086		

Obligations by objects—Continued

Object classification	1951 actual	1952 estimate	1953 estimate
ALLOCATION TO DEPARTMENT OF AGRICULTURE			
01 Personal services:			
Permanent positions	$65,209		
Part-time and temporary positions	2,742		
Total personal services	67,951		
02 Travel	18,050		
03 Transportation of things	4,999		
04 Communication services	1,203		
06 Printing and reproduction	7		
07 Other contractual services	1,486		
Services performed by other agencies	1,429		
08 Supplies and materials	24,553		
09 Equipment	53,879		
Taxes and assessments	322		
Total obligations	173,879		
SUMMARY			
Summary of personal services			
Total number of permanent positions	1,566	1,633	2,677
Full-time equivalent of all other positions	12	10	10
Average number of all employees	1,423	1,507	1,884
Average salaries and grades:			
General schedule grades:			
Average salary	$3,884	$4,357	$4,311
Average grade	GS–4.6	GS–5.9	GS–6.0
Crafts, protective, and custodial grades:			
Average salary	$2,696	$3,047	$2,958
Average grade	CPC–4.0	CPC–4.1	CPC–4.3
Ungraded positions: Average salary	$4,204	$6,479	$7,893
Personal service obligations:			
Permanent positions	$5,503,217	$6,550,226	$8,123,905
Part-time and temporary positions	44,326	43,780	47,330
Regular pay in excess of 52-week base		22,889	36,115
Payment above basic rates	105,731	99,585	125,395
Total personal service obligations	5,653,274	6,716,480	8,332,745
Direct obligations			
01 Personal services	4,462,557	5,139,020	5,968,960
02 Travel	125,762	119,500	135,500
03 Transportation of things	26,051	17,100	21,700
04 Communication services	43,163	42,950	55,450
05 Rents and utility services	74,854	74,600	109,200
06 Printing and reproduction	33,140	38,700	44,300
07 Other contractual services	81,180	54,650	111,750
Services performed by other agencies	1,429		
08 Supplies and materials	751,082	709,300	869,900
09 Equipment	349,355	269,700	245,000
10 Lands and structures	32,959		
11 Grants, subsidies, and contributions	8,031,862	9,350,000	9,335,000
13 Refunds, awards, and indemnities	618		
15 Taxes and assessments	4,488	6,800	14,120
Subtotal	14,018,500	15,822,320	16,910,880
Deduct charges for quarters and subsistence	12,617	16,320	34,880
Total direct obligations	14,005,883	15,806,000	16,876,000
Obligations payable out of reimbursements from other accounts			
01 Personal services	1,190,717	1,577,460	2,363,785
02 Travel	8,335	24,750	27,050
03 Transportation of things	1,381	8,300	10,950
04 Communication services	17,008	18,900	34,700
05 Rents and utility services	55,650	58,000	101,400
06 Printing and reproduction	18,673	21,500	29,100
07 Other contractual services	49,240	58,800	54,600
08 Supplies and materials	346,054	394,190	578,235
09 Equipment	131,269	140,200	115,500
15 Taxes and assessments	750	1,900	10,580
Total obligations payable out of reimbursements from other accounts	1,819,077	2,304,000	3,325,900
Total obligations	15,824,960	18,110,000	20,201,900

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$1,766,069	$2,479,735	$2,504,570
Adjustment in obligations of prior years	36,436		
Obligations incurred during the year	16,024,960	18,110,000	20,201,900
	17,827,465	20,589,735	22,706,470
Deduct:			
Reimbursable obligations	1,819,077	2,304,000	3,325,900
Unliquidated obligations, end of year	2,479,735	2,504,570	2,565,210
Obligated balance carried to certified claims account	35,995		
Total expenditures	13,492,658	15,781,165	16,815,360
Expenditures are distributed as follows:			
Out of current authorizations	12,456,147	13,610,000	14,907,000
Out of prior authorizations	1,036,511	1,883,525	1,890,000
Out of anticipated 1952 supplemental for pay increases		287,640	18,360

Construction of Research Facilities

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$15,125,000	$17,685,540	$3,230,000
Applied to contract authorization	−11,100,000	−10,650,000	−3,230,000
Contract authorization	350,000		
Contract authorization due to escalation provision	373,065	856,144	
Prior year balance available:			
Appropriation	4,451,159	7,644,958	2,500,000
Contract authorization	20,323,133	10,746,138	2,182,444
Total available for obligation	29,522,297	26,282,780	4,682,444
Balance available in subsequent year:			
Appropriation	−7,644,958	−2,500,000	−500,000
Contract authorization	−10,746,138	−2,182,444	−2,029,149
Obligations incurred	11,131,201	21,600,336	2,153,295

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Description			
1. Design, supervision, etc.	$496,438	$600,000	$440,000
2. Construction	10,618,400	11,905,600	1,713,295
3. Purchase and installation of equipment and supplies	579,446	9,056,094	
4. Incidental expenses	36,917	19,242	
5. Fire protection		20,000	
Obligations incurred	11,131,201	21,600,336	2,153,295

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
PUBLIC HEALTH SERVICE			
Total number of permanent positions	15	33	
Average number of all employees	5	26	
Average salaries and grades:			
General schedule grades:			
Average salary	$3,282	$3,409	
Average grade	GS-5.8	GS-4.4	
Crafts, protective, and custodial grades:			
Average salary		$2,552	
Average grade		CPC-3.0	
01 Personal services:			
Permanent positions	$27,931	$84,321	
Part-time and temporary positions	305		
Regular pay in excess of 52-week base		419	
Total personal services	28,236	84,740	
02 Travel	4,947		
03 Transportation of things	327	24,000	
06 Printing and reproduction	182		
07 Other contractual services	2,115	19,242	
08 Supplies and materials	697	2,540,000	
09 Equipment	579,839	6,406,054	
10 Lands and structures		20,000	
15 Taxes and assessments	20	1,300	
Obligations incurred	616,363	9,095,336	
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
02 Travel	1,674	2,500	$500
06 Printing and reproduction	23,401	30,000	6,000
07 Other contractual services	464,630	557,500	431,500
08 Supplies and materials	6,733	10,000	2,000
09 Equipment		400,000	200,000
10 Lands and structures	10,018,400	11,505,000	1,513,295
Obligations incurred	10,514,838	12,505,000	2,153,295
SUMMARY			
Total number of permanent positions	12	33	
Average number of all employees	5	26	
Average salaries and grades:			
General schedule grades:			
Average salary	$3,282	$3,409	
Average grade	GS-5.8	GS-4.4	
Crafts, protective, and custodial grades:			
Average salary		$2,552	
Average grade		CPC-3	
01 Personal services:			
Permanent positions	$27,931	$84,321	
Part-time and temporary positions	305		
Regular pay in excess of 52-week base		419	
Total personal services	28,236	84,740	
02 Travel	6,621	2,500	$500
03 Transportation of things	327	24,000	
06 Printing and reproduction	23,583	30,000	6,000
07 Other contractual services	2,115	19,242	
Performed by "Construction services, General Services Administration"	464,630	557,500	431,500
08 Supplies and materials	7,430	2,550,000	2,000
09 Equipment	579,839	6,806,054	200,000
10 Lands and structures	10,018,400	11,525,000	1,513,295
15 Taxes and assessments	20	1,300	
Obligations incurred	11,131,201	21,600,336	2,153,295

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$16,473,013	$17,555,204	$15,828,294
Obligations incurred during the year	11,131,201	21,600,336	2,153,295
	27,604,214	39,155,540	17,981,589
Deduct unliquidated obligations, end of year	17,555,204	15,828,294	781,589
Total expenditures	10,049,010	23,327,246	17,200,000
Expenditures are distributed as follows:			
Out of current authorizations:			
Out of appropriations to liquidate prior year contract authorization	10,049,010	9,763,990	3,230,000
Out of new obligational authority		4,000,000	
Out of prior authorizations		9,563,256	13,970,000

Mr. FOGARTY. The committee will come to order. We have before us this morning the National Institutes of Health. Dr. Sebrell, do you have a statement for the committee?

GENERAL STATEMENT

Dr. SEBRELL. I have no prepared, written statement, but I would like to make a statement concerning the Institutes.

I think the committee members are all familiar with the history of the National Institutes of Health and I will not take your time to go over that in detail just now. As you know, we have grown during the past 65 years from a very small laboratory to one of the world's leading medical research institutions.

PRESENT PROGRAM OBJECTIVES

Our program at the present time has three principal objectives:

1. One is to provide continuity of medical research effort throughout the country by assisting research in medical schools, universities, and various research laboratories where we now support activities in about 270 institutions throughout the country.

2. A second principal objective is to furnish to this country a continuing supply of trained research manpower and, in that connection, we have a fellowship program designed to support young men in training in basic biological and medical sciences to provide the needed supply of young, well-trained brains in medical research.

3. The third objective is to carry on research in our own laboratories in the Public Health Service in the fields of medical research where it is indicated.

The appropriations we are requesting for the coming year show increases only in connection with the opening and the beginning of work in the clinical research center and I would like to say something in greater detail about that in just a moment. But before going into that I would like to tell you a little bit of what we have accomplished in the past year with the funds we have had.

ESTABLISHMENT OF NEW INSTITUTES

You may remember that Congress, in Public Law 692, gave the Surgeon General the authority to set up two new institutes, namely, the Institute of Neurological Diseases and Blindness and an Institute of Arthritis and Metabolic Diseases. This authority was designed to permit and encourage further investigation into groups of diseases in which there was not sufficient activity being carried on.

The same law authorized the Surgeon General to reorganize and consolidate and to create new institutes where it was indicated and under that authority one new institute has been created during the year—the National Microbiological Institute. Since these are new institutes that have been created during the year, and since we have new directors in these institutes, I would like to introduce to the committee these men and have them briefly tell a little about their programs.

The first man I would like to introduce is Dr. Victor H. Haas, Director of the National Microbiological Institute. Dr. Haas has been selected to head the work in infectious diseases, the viruses, and the parasitic diseases. Dr. Haas comes to us with a brilliant background in research in various infectious diseases such as plague and malaria. In 1941 he went to China as chief medical health officer, supervising about a quarter of a million men in building a railroad and was attached to General Stilwell's staff as chief health officer of the construction forces on the Burma Road. He returned to us in malaria research and has now come in as Director of this new Institute. I would like to have him tell you about his plans for this Institute.

Dr. HAAS. Thank you.

BACKGROUND OF DIRECTOR OF THE NATIONAL MICROBIOLOGICAL INSTITUTE

Mr. FOGARTY. Will you tell us, for the benefit of the committee and the record, something of your background, how long you have been in the Public Health Service and any other facts about your experience that you think would be of interest to the committee.

Dr. HAAS. I was born in Cincinnati in 1909 and entered the Public Health Service in 1931 after graduating from the College of Medicine of the University of Cincinnati. I have been a career officer in the Public Health Service since that time engaged in the work Dr. Sebrell touched on.

Mr. FOGARTY. What have you been doing during the last 5 or 6 years?

Dr. HAAS. Immediately after my return from the overseas assignment during the war, I was in charge of malaria research for the National Institutes of Health at Memphis, Tenn., and in 1948 came to my present job at Bethesda.

FUNCTION OF THE MICROBIOLOGICAL INSTITUTE

The Microbiological Institute is interested primarily in infectious and parasitic diseases. Even though enormous progress has been made in these fields in our lifetimes there remain many problems which require new knowledge and more research. I would like to report briefly to you on some of these problems and the manner in which we have been dealing with them.

RESPIRATORY DISEASE PROGRAM

First, I would like to speak about a group of diseases called respiratory illnesses—the disease influenza and a number of diseases not too well defined but which include the common cold, grippe, intestinal flue, winter diarrhea, and so forth.

You all know what these diseases are because we all have them. They are often called the minor respiratory illnesses. They are minor in the sense that they do not usually kill us. They cause us discomfort, loss of time from work and school and are a major cause of absenteeism in industry and school.

This group of illnesses includes a variety of things we do not understand too well, for which we have no real method of prevention and cure or treatment and about which we have to learn more if we are to reduce the illness they cause every winter.

INVESTIGATIVE STUDIES UTILIZING COMMUNITY APPROACH

During the past few months the National Institutes of Health have been evolving a system of investigation into this type of disease which we refer to as the community approach. Instead of selecting an individual with one of these diseases we go into a community and with the cooperation of the people in the area selected for study we are able to observe progress of these several conditions or diseases during the term of study. We observe how these diseases appear in school or in the home or at work, what causes them to spread, and the change with age and season and so on.

Information thus gained combined with the laboratory study of material taken from the patient's nose and throat washings, blood and materials from the stools has helped our research scientists to identify the causative agents for the illnesses in the community. This approach proved quite effective under several conditions in the past and enabled one of our scientists in Norfolk over a period of years to show the value in increased effectiveness of combining whooping-cough vaccine with diphtheria toxoid and enabled us to trace down the spread of Q fever in California and conjunctive eye diseases in the South.

In the community of Parkwood, Md., we discovered the answer to a problem in the disease herpengina which appears largely in children. It does not kill children but causes painful ulcerations in the mouth, loss of time from school, and this community approach has enabled us to identify the cause of the disease.

In Texas last fall a similar study enabled us to work out the cause of the disease known as Devil's grip. This study is being completed in the laboratory here.

We propose in this method of study to go into the question of these minor respiratory illnesses; by combining field and laboratory approach we will be able to define more clearly what these conditions are and to determine more exactly their causes and finally to come out with some method of control.

RESEARCH DEVELOPMENT TO COMBAT HEPATITIS

I would like next to talk briefly about the disease hepatitis, a convenient common term for which is jaundice. Dr. Scheele mentioned this disease in his testimony. There are, in fact, two diseases. One is the type that spreads about in a community and for which the name is epidemic jaundice; the other is serum jaundice which results when infected blood or a derivative of blood is given.

This serum hepatitis presents a most important problem which we are trying very hard to solve. Plasma is particularly dangerous because we pool plasma from a whole bunch of donors and if one of these donors harbors a virus it will affect the entire pool and create hazards to anyone of the people who get blood transfusions from that pool.

This problem has occasioned great difficulty to the Armed Forces in Korea. The two forms of the disease cause the greatest nonbattle casualties there. We cannot separate the two diseases in the field. It is obviously impossible to tell whether a person with jaundice has the serum type or the other, particularly if he has been given blood plasma.

Our scientists are pioneers in the field and they have been able to show that by the use of ultra-violet radiation of the plasma one can reduce this hazard. This is a complicated procedure and we are still unable to say whether or not serum hepatitis can be eliminated by this treatment. In the last year we have made more progress in the field by developing at Bethesda an ingenious monitoring device which enables us to record the amount of radiation to which a given lot of plasma has been exposed.

Part of our research on hepatitis is done with the assistance of Federal prisoners who volunteer to participate in this study. We have no chick embryo for keeping the virus alive so we must depend upon volunteers.

INSPECTION AND LICENSING OF BLOOD BANKS

We now inspect and license 122 blood banks in the United States, 91 of which are part of the national defense system.

I should like to touch on our awareness of the needs of national defense and the manner in which we have expressed our concern with some of these problems brought to the fore within the last year.

Many of us are quite concerned over the fact that infectious disease control, adequate in the past, would not appear to be adequate in light of modern needs. We feel that better methods of dealing with these diseases are now needed. We cannot wait, as in the past, some 10 to 20 days until a patient is well or has gone home to determine by laboratory tests what the disease is. We need better methods to immunize the people and we need better treatment. We have no treatment of a specific nature for many of these diseases—the respiratory diseases I mentioned, poliomyelitis and others.

SECTIONAL RESEARCH PROGRAM

To meet these situations we have set up a sectional research program which is based on the voluntary collaboration of some 80 non-Federal laboratories so we may take advantage of the initiative and

ideas of scientists all over the United States in the Government as well as out. These laboratories receive some support from us financially through grants-in-aid and in time of national emergency they will be able to come to the aid of the official agencies.

In our own laboratories in Bethesda we have made progress in developing more rapid methods of detection by a flocculation test which gives some opportunity to cut down the time necessary to detect the disease.

OTHER DISEASES CONSTITUTING RESEARCH PROBLEMS

You have not the time for me to go into a great deal of detail. I would like to mention malaria. We keep talking about the great progress made but there are still problems in malaria. We still need better drugs to cure relapsing malaria and the Department of Defense has asked us to collaborate in this study. I would mention also schistosomiasis, which is prevalent, not in the United States, but in regions where we have economic commitments. That is a disease which causes a great deal of difficulty year in and year out. Here we have made progress in controlling the disease by killing the snail which is the intermediate host of the parasite which causes it.

Manufacture of yellow-fever vaccine is one of our activities. We are the only manufacturer of that vaccine in North America.

Tuberculosis is one of the most important infectious diseases, the one that from the standpoint of mortality is the most important. Here we have worked for many years for the purpose of developing better prevention for the disease and we feel we have a promising method of developing a vaccine.

These are some of the things with which we are concerned which still constitute real, live problems.

Dr. SEBRELL. Before going ahead with my testimony, I am sure Dr. Haas would be glad to answer any questions on this subject.

Mr. FOGARTY. I think, Doctor, in view of the time we have, you had better continue.

BACKGROUND OF DIRECTOR OF NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Dr. SEBRELL. I would like to introduce the new Director of the new National Institute of Neurological Diseases and Blindness, Dr. Pearce Bailey. He comes to us with a brilliant record in neurology. He served in the Navy during the war and was in charge of the neurological service at the big naval hospital at Philadelphia which was the chief training center in neurology for naval medical officers.

He left the Navy and went to the Veterans' Administration where he organized the Neurological Service into one of the foremost services in the country. He has been professor of neurology in Georgetown Medical School and has just assumed his present position with us. If time permits he will tell you a little of his plans in the new Institute.

Dr. BAILEY. Mr. Chairman and gentlemen of the committee, as Dr. Sebrell has just remarked, the activation of our Institute is a recent event, we have only been in active operation a little over 3 months. In view of our immaturity, I would like to say a few words concerning

the scope of the problems we must face, the present status of research and training in neurological and blinding eye disorders, and our present activities and hopes for the future.

SCOPE OF PROBLEM CONFRONTING THE ACTIVITY

In regard to the scope of the problem, it is well to understand in the beginning that neurological and sensory disorders are not predominantly killers. They are cripplers and torturers, and their victims may linger on for years and years as a terrific drain on manpower and production.

Mr. FOGARTY. What are neurological disorders?

Dr. BAILEY. Neurological disorders are disorders of the nervous system, which comprises the brain, the spinal cord, the nerves and the so-called autonomic nervous system, which controls the action of the heart, blood vessels, and internal organs of the body. In brief, it is the central switchboard of the body and the personality.

Mr. FOGARTY. Thank you. Continue with your statement.

NEUROLOGICAL DISORDERS AS DEFENSE PROBLEM

Dr. BAILEY. When in the Navy I became keenly aware of the significance of neurological disorders as a defense problem. At that time I studied and tried to help some of the 20,000 servicemen who suffered penetrating wounds of the brain, 35 to 50 percent of whom have or will develop epilepsy; some of the even greater number of brain concussions whose diagnosis and disposition was such a problem during the war; some of the many paraplegics, not a few of whom had lost the ability to move or feel from the neck down; and some of the 250,000 who suffered from peripheral nerve injuries. I also had occasion to observe some of the thousands of servicemen who were affected with blinding eye conditions as well as those suffering from hearing defects due to wounds, disease, or exposure to blast.

Later, when I went to the VA, the magnitude of the problem was even more apparent. About 20 to 25 percent of all patients in VA hospitals or domiciliary homes suffer from a disorder of the nervous system. Since in most cases the damage had been done and we know of no methods to repair nervous tissue, we bent a large part of our energies in the direction of total rehabilitation. It was soon established that 75 percent of all neurological disorders can be rehabilitated to varying degrees of self-care and gainful employment. Some of these patients had been bedridden for as much as 10 and 20 years. Because of the susceptibility of neurological disorders to total rehabilitation procedures, our institute has been designated a focal point for these activities in the National Institutes of Health.

EFFECT OF NEUROLOGICAL DISORDERS IN CIVIL LIFE

If we shift our focus from war casualties to neurological disorders in civil life we are again struck by the magnitude of the problem. About 10,000,000 Americans suffer serious forms of these conditions—common among them are epilepsy, cerebral palsy, multiple sclerosis, hemiplegia, poliomyelitis, muscular dystrophy, brain tumor, parkinsonism (shaking palsy), encephalitis, meningitis, and the many chronic

eye and ear diseases. The causes of most of these diseases are unknown and, therefore, there are no specific cures.

These are disorders which often affect children or adults of normal intelligence during the very prime of life. Their effects are usually severe and tragic—resulting in severe social and occupational handicaps. Paralysis may ensue or mental symptoms from brain damage, excruciating pain, convulsions, grotesque involuntary movement, loss of bladder and bowel control, loss of the ability to feel, and loss of the ability to express oneself or to comprehend the written or spoken word.

We are all aware of the pathetic picture of paralysis and uncontrollable movements given by the cerebral palsied; of the feeling of social discrimination and degradation experienced by the epileptic when seeking gainful employment; of the aura of defeat facing those with multiple sclerosis or muscular dystrophy in their fight against a progressive disease; and the certainty of darkness that surrounds the blind.

Another 10,000,000 persons suffer from less irreparable disabilities as chronic headache, including migraine, neuralgia, neuritis, radiculitis, sciatica, Bell's palsy (facial paralysis), and herpes zoster (shingles). Likewise for these disabilities there are no specific cures.

Not included in these lists are the thousands who each year sustain accidental injuries to the nervous system which accounts for a heavy loss to the country in terms of manpower and production. For instance, let us look at just one illustration—that provided by head injuries. We know that 200,000 persons are absent from full occupation every day of every year as a result of head injuries alone, a loss of 416,000,000 man-hours. If we add to this injuries of the spinal cord and peripheral nerves and the neurological and blinding eye diseases already mentioned, the Nation's loss in man-hours assumes extreme proportions.

PRESENT STATUS OF RESEARCH AND TRAINING FACILITIES FOR NEUROLOGICAL AND SENSORY DISORDERS

The size of our problem, gentlemen, leads us to inquire concerning the facilities for research in neurological and sensory disorders and for the training of specialized personnel for their investigation and management.

Of all the millions of dollars spent in research grants in 1951 from all sources, both government and private, only $2,800,000 was allocated to research in neurological and blinding eye disorders, except for poliomyelitis. Of this, only $375,000 was given for research into diseases of the eye, and only $56,000 to diseases of the ear. These relatively small funds for research in these fields makes us wonder why the nervous system has been so long neglected—and particularly when one considers that it is the most highly organized system of the body and the only one that gives man superiority over the lower animals.

Turning from research to a consideration of existing facilities for the training of specialized personnel for the diagnosis, investigation, and management of neurological and blinding eye disorders, we find the situation equally grave. Only a fraction of our 79 medical schools have complete neurological units. There are only 151 available posi-

tions for the training of neurologists in the entire country—certainly a small number for a patient load of 20,000,000. During the last 3 months 35 medical schools from all parts of the country have written us, expressing a need for teaching grants and traineeships in the amount of approximately $1,000,000. Opportunities for training in ophthalmology are only slightly better, but in rehabilitation they are even worse.

We do not need to look far. Right in our own backyard in the Nation's Capital we have the Children's Hospital, reputedly the largest in the world, has sought to obtain an electroencephalograph or brain-wave machine in order to establish a modern epilepsy clinic. It costs about $4,000, but for 2 years they have been unable to raise the money.

FUTURE PROGRAMS

I would like say a few words about the prospects of our program for the future. We know that research into neurological and sensory disorders pays off. It has done so in the past, even though it has received only moderate support.

To give a few illustrations, we need only point to the invention and perfection of the electroencephalograph, or brain-wave machine, which has been such a help in the diagnosis of brain disease, especially epilepsy; to the discovery of angiography and arteriography, by Egas Moniz, famous Portuguese neurologist and winner of the Nobel prize. The latter two are procedures by means of which a contrast medium is instilled in the blood vessels of the brain which allows them to show up in an X-ray, and hence is valuable for diagnosis of vascular malformations and other conditions of the brain.

Also, we can point to the discovery of new antiseizure drugs which, today, if properly administered, can prevent 80 percent of all epileptic seizures; to the new drugs used in the control of certain neuromuscular disorders; and the great advances made in neurosurgery which have added to our knowledge of brain functions, management of wounds of the nervous system, the treatment of pain, the control of pain, and the removal of brain tumors.

Evidence that research into neurological and blinding eye diseases will pay off even more is indicated by new and promising lines of research just recently developed.

INVESTIGATION OF EFFECTS OF PRENATAL, NATAL AND POSTNATAL INJURY ON NERVOUS SYSTEM

A new promising line of investigation has begun to discover the effects of prenatal, natal, and postnatal injury on the nervous system and the eye. We know that the nervous system is more susceptible to injury before, during, and shortly after birth than any other bodily system. Evidence is accumulating to indicate that infections, toxins, lack of oxygen and other conditions in the mother account for certain forms of cerebral palsy and malformation of the eye. Already, in collaboration with the National Microbiological Institute, we have begun a project of this kind at Bethesda and hope to eventually be able to give it a real support.

RESEARCH ON DEMYELINATING DISEASES

Again, newly discovered chemical complexes by one of our grantees in nerve tissue promises to throw new light on the demyelinating diseases of the nervous system, of which multiple sclerosis is the most common. It is logical to presume that these investigations will lead to a clearer knowledge of the process of demyelinization and the agents or conditions which might precipitate it. We are drawing up interesting plant to penetrate further into these biochemical studies in Bethesda with the hope of eventually being able to support them.

ADJUNCTIVE AGENTS IN TREATMENT OF MENINGITIS

Another promising line of research concerns the use of certain adjunctive agents in the treatment of meningitis. For instance, the use of streptomycin in tuberculosus meningitis is not as effective as originally hoped. This is because of the thick tuberculosus exudate, a sticky substance in the spinal fluid which destroys the vital nerve centers at the base of the brain before streptomycin can attain its full therapeutic effect on the tuberculosis germs in the nervous system. A group of investigators in Oxford, England, have found in a few cases that tuberculin given at the same time as streptomycin is far more effective. The tuberculin apparently liquifies the thick exudate and enables streptomycin to reach full potency in attacking the tuberculosis germs The line of investigation is still in its infancy, but it is too important to be limited to one group of investigators in one country.

STUDY IN METHODS OF STRENGTHENING BLOOD-BRAIN BARRIER

Still another promising line of research lies in strengthening the resistance provided by the so-called blood-brain barrier. As you may know, there is a barrier between the blood and the brain. If this barrier weakens, as it often does, diseases of the blood like measles, mumps, influenza, syphilis, tuberculosis, and a host of others, can pass into the nervous system with disastrous results. The time has come to study methods of strengthening this blood-brain barrier. In fact, one of our grantees is doing just this thing and we hope to have important results to report in a year or so.

PREDICTION OF SIGNIFICANT DISCOVERIES IN BLOOD DISEASES OF THE BRAIN

We also wish to predict significant discoveries in blood diseases of the brain in the near future. All doctors know that the circulation of the brain has certain special features not found in other organs. Nonetheless, very little investigation in the special features of brain circulation has been done, in spite of the fact that stroke from brain hemorrhage is the No. 3 killer in the United States. Harvey dis-

covered the general principles of the circulation of the blood, in 1628, but it was not until 1950 that Dr. Seymour Kety, who is in charge of our program in fundamental research at Bethesda, devised a sound method for studying the rate of blood flow and metalbolism of the brain. We hope to be able to adequately continue these investigations in order to diminish the crippling and often mortal effects of blood and circulatory disorders of the brain.

EFFECTIVENESS OF ACTH AND CORTISONE IN TREATMENT OF CHRONIC DISEASES OF THE EYE

The demonstrated effectiveness of ACTH and cortisone in certain chronic diseases of the eye opens still another field of investigation. Three of our grantees are working on this problem right now. Also the problem of devising replacement for damaged corneas may be solved. One of our grantees has devised a plastic replacement for the damaged cornea of rabbits, which may with further research be applied to human sufferers.

POSSIBILITY OF STRUCTURAL REGENERATION OF NERVES IN SPINAL CORDS

Finally, gentlemen, I would like to mention a new hope to discover ways to restore damaged nerve fibers. As previously mentioned, the restoration of damaged tissue of the central nervous system, unlike other tissues of the body, was considered impossible. Recent investigations, however, indicate that this might not be true. In fact, these investigations demonstrate that certain amount of structural regeneration of nerves in the spinal cords of animals can be obtained. It is reasonable to suppose that if support were given to further research in these projects, we might eventually find methods for the restoration of damaged nerve tissue in man.

PUBLIC INTEREST IN ACTIVITY AND GRANT ALLOCATIONS

Mr. Fogarty. I presume most Members of Congress have been receiving quite a bit of mail on this particular institute. I know I have from very many States and many Members have called the committee here as to the amount that is being spent in this particular institute. They all want more money, of course. I think we should have prepared for the record a breakdown of the amount of money that is being spent in this particular institute for grants for research and training fellowships, prepared in such a way that it will be indicated what is being done on epilepsy, cerebral palsy, muscular dystrophy, and the other neurological diseases you talked about today.

(The requested information is as follows:)

National Institute of Neurological Diseases and Blindness—breakdown by diseases covered under 1952 program

Research grants:	
Cerebellar Syndrome	$10,400
Cerebral palsy	39,400
Cerebral vascular disease	47,200
Congenital malformations of the brain	6,000
Epilepsy	85,000
Degenerative brain disease	13,100
Hydrocephalus	5,600
Multiple sclerosis and other demyelinating diseases	111,500
Muscular dystrophy	9,900
Neurotrophic virus diseases (other)	14,500
Neurological distrubance from liver disease	6,000
Neuromuscular disease	64,500
Organic brain diseases	60,300
Pain	12,500
Paralytic disorders	50,200
Peripheral nerve injuries	4,700
Poliomyelitis	7,800
Other neurological diseases and conditions	181,200
Diseases and conditions of the eye	251,800
Diseases and conditions of the ear	33,400
Total research grants	[1]1,015,000
Research fellowships	51,400
Training stipends	36,000
Direct operations	66,650
Total	1,169,050

[1] Based on extension of research grants supported thus far in fiscal year 1952. Does not reflect all grants currently active nor grants in these fields supported by the National Institute of Mental Health.

BUDGET FOR MULTIPLE SCLEROSIS RESEARCH 1951 TO 1953

For 3 or 4 years I have been trying to get the Public Health Service to do more than they have been doing in research on multiple sclerosis and I wish you would elaborate a little more on that. How much is being spent on it and what grants are made?

Dr. TOPPING. In 1951 in neurology we had $60,950; in mental health $77,400; actively supporting research in multiple sclerosis, the total for the year $138,350.

This fiscal 1952 the neurology appropriation was $104,500; mental health $58,890; making a total for 1952 of $163,390.

For 1953 $134,500 for neurology; $35,500 for mental health; and this gives a total of $170,000 for the Institute.

Mr. FOGARTY. Will you give me a breakdown for the record to show how that money will be spent?

Dr. TOPPING. We will.

(The requested information is as follows:)

Expenditures in the field of multiple sclerosis

	1951	1952	1953
National Institute of Neurological Diseases and Blindness:			
Grants:			
Directly related	$60,950	$70,000	$70,000
Fundamental		31,500	31,500
Fellows		3,000	3,000
Direct operations			30,000
Total	60,950	104,500	134,500
National Institute of Mental Health:			
Grants:			
Directly related	43,050	50,150	34,960
Fundamental			
Fellows	25,700	7,140	540
Direct operations	8,650	1,600	
Total	77,400	58,890	35,500
Grand total, multiple sclerosis	138,350	163,390	170,000

Mr. FOGARTY. Do you know anything more about the cause of multiple sclerosis today than you did a few years ago?

Dr. BAILEY. No. Except in leads provided by the discovery of new chemical complexes which may be important in understanding the demyelinating process.

DEFINITION OF DEMYELINATING PROCESS

Mr. FOGARTY. What do you mean by this demyelinating process?

Dr. BAILEY. Each nerve fiber has a central axis cylinder which is covered by a fatty material called the myelin sheath. In multiple sclerosis this fatty sheath dissolves first into fat globules and then disappears, being replaced by scar or sclerotic tissue which does not support what is left of the nerve fiber, but destroys it. This is essentially the demyelinating process, and in multiple sclerosis it occurs in many or multiple patches throughout the central nervous system; hence the name "multiple sclerosis."

If we know what makes this myelin sheath dissolve, then various agents can be tried to see what causes demyelination and what can be done to prevent it. In a certain sense, therefore, we are further advanced than previously, but actually as to the specific cause or causes of multiple sclerosis we know no more than Charcot did when he described it 80 years ago.

CONTROL OF MULTIPLE SCLEROSIS BY REHABILITATION PROCEDURES

Mr. FOGARTY. Have any advances been made in control of this disease?

Dr. BAILEY. No advances have been made in the control of the disease other than rehabilitation.

Mr. FOGARTY. It is a progressive disease?

Dr. BAILEY. Yes. Subject to remissions or intervals when the symptoms are less severe.

Mr. FOGARTY. How can you rehabilitate a person who is getting progressively worse?

Dr. BAILEY. I think I can give you an example of that.

In multiple sclerosis there is frequently a paralysis of the legs. This is a spastic, stiff type of paralysis in contrast to the soft, flabby type of paralysis seen in diseases such as poliomyelitis. The stiff type of paralysis often results in a contracture or locking of the joint which deprives the patient of the ability to walk. By rehabilitation procedures these contractures can often be avoided, thus preserving the patient's ability to walk and allowing him to continue in a job for many years. Therefore, even though the disease itself is progressive, frequently by such procedures as this the patient can be kept on a productive level for a considerable amount of time.

ESTIMATED NUMBER OF CASES OF MULTIPLE SCLEROSIS AND OTHER DEMYELINATING DISEASES

Mr. FOGARTY. Do you know today how many are afflicted with this disease in this country?

Dr. BAILEY. Our estimate is that there are about 300,000 cases of multiple sclerosis but that includes other demyelinating diseases.

Mr. FOGARTY. How do you arrive at that estimate?

Dr. BAILEY. From a survey of samples of our own and the literature and on general estimates. It is not an indisputable figure because the morbidity of multiple sclerosis is difficult to track down. It is not reportable and diagnostic criteria vary from place to place.

INVESTIGATIONS TO DETERMINE CAUSES OF CEREBRAL PALSY

Mr. FOGARTY. In cerebral palsy, are you making any headway with that problem?

Dr. BAILEY. We have not. Most cases are not progressive and, therefore, respond well to rehabilitation. There is some hope of discovering causes of these conditions in the recent investigations of prenatal, natal, and postnatal injuries, in infections and toxins of the mother and young child. It is quite possible that these investigations may supply clues to causes of cerebral palsy.

CHILDREN'S REHABILITATION INSTITUTE

Mr. FOGARTY. What about this Children's Rehabilitation Institute in Maryland? Are they getting assistance through this appropriation?

Dr. BAILEY. We do not have any teaching grants. The only grants we have are in research and a few traineeships.

Mr. FOGARTY. They do not get any kind of a grant?

Dr. BAILEY. I think what they would be interested in would be a teaching grant to teach there and train people and to distribute literature concerning rehabilitation for cerebral palsy.

Mr. FOGARTY. I received a number of letters praising this particular institute for the work they are doing in rehabilitation of children. Is it one of the better institutes in the country?

Dr. BAILEY. I should say it was for cerebral palsy. Yes.

TOTAL FUNDS AVAILABLE FOR NEUROLOGICAL INSTITUTE, 1951–53

Dr. TOPPING. You asked a question. I can supply the information. The total appropriation for the Neurological Institute just before Public Law 692 passed in the present year and what is in the budget for next year.

Mr. FOGARTY. Will you put that in the record?

Dr. TOPPING. Yes .

Mr. FOGARTY. Thank you, Doctor.

(The information referred to follows:)

FUNDS AVAILABLE

National Insitute of Neurological Diseases and Blindness

	1951 [1]	1952	1953
Grants:			
Research grants	$342,708	$1,015,000	$1,015,000
Research fellowships	3,278	51,400	51,400
Training stipends		36,000	36,000
Total grants	345,986	1,102,400	1,102,400
Direct operations:			
Research:			
Basic		66,650	75,000
Clinical Center:			
Clinical investigation			45,000
Visiting scientist			7,500
Relocation of projects			10,300
Total direct operations		66,650	137,800
Grand total	345,986	1,169,050	1,240,200

[1] Represents program level at time Public Law 692 was passed

INTRODUCTION OF NEW DIRECTOR OF ARTHRITIS AND METABOLIC DISEASES INSTITUTE

Dr. SEBRELL. At this point I had planned to introduce to you the new Director of the Arthritis and Metabolic Diseases Institute. Unfortunately, he has had mild heart attack and his physician will not permit him to leave the hospital this morning. So, instead, we would like to submit for the record a statement prepared by Dr. Wilder who is this new Director.

He is one of America's most distinguished physicians in the field of metabolic diseases. He comes to us from the head of the Department of Medicine of the Mayo Foundation—that is the Mayo Clinic, Rochester, Minn. He is an internationally known authority in the field of diabetes as well as having a great reputation in other diseases.

I would like to submit his statement for the record.

Mr. FOGARTY. We will include it in the record at this point.

STATEMENT OF DR. RUSSELL M. WILDER, DIRECTOR, NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES, NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE, FEDERAL SECURITY AGENCY

Mr. Chairman and members of the committee, I came to this new National Institute of Arthritis and Metabolic Diseases as its Director a year ago. Before then I was chief of the department of medicine of the Mayo Foundation—that is in the Mayo Clinic. It was there, as you recall, that cortisone was synthesized by E. C. Kendall and its dramatic action on the symptoms of arthritis was discovered by Philip Hench. You will recall, also, that Kendall and Hench together

with Reichstein received the Nobel Prize for these contributions. Hench and Kendall were my colleagues. Hench's work was done in my department. I saw all of it from its earliest beginnigs.

At the Mayo Clinic I had much to do with diabetes, obesity, and thinness, anemia and other abnormalities of nutrition, goiter, and the diseases of the adrenal glands and of other glands of internal secretion. These are the metabolic diseases. Some of them—those dependent on abnormality of the glands—are also known as endocrine diseases.

Having this background, the invitation to direct this Institute of Arthritis and Metabolic Diseases was for me an inspiring challenge. It remains so, and I only hope that you gentlemen and the House to which you will submit your recommendations will share some part of my concern to secure the fullest development of research into the nature of this large and important segment of chronic diseases.

It is important to the Nation. Arthritis in its many forms accounts for disability in about 1 person in every 20. I have recently completed a study of the prevalence of diabetes which indicates that 1 percent of the population has the disease and that for every case so diagnosed four more carry the inheritance. There, indeed, is a public health problem—to prevent those who inherit the predisposition from developing the disease.

We have set up three divisions in our institute—the first to deal with extramural activities; the second for clinical investigators; and the third to carry out basic research at Bethesda.

To head the extramural activities we have selected Dr. Ralph E. Knutti, who formerly was with the Rockefeller Institute. He deals with research grants, fellowships, and traineeships. The number of requests for grants is rapidly growing and bears witness to the greatly increased interest in this area of research. We are collaborating closely in this work with voluntary organizations—the Arthritis and Rheumatism Foundation and the American Diabetes Association, of which I am a past president. In contrast to the older institutes at Bethesda, we have not as yet been able to develop special control, teaching, or construction programs, although the need for them is great, as I could show you.

Another division will deal with the clinical investigations to be undertaken in the new clinical center. I am immensely pleased that Dr. Charles S. Davidson has agreed to assume the direction of these clinical investigations. He is very highly thought of in the medical world and comes to us from the Thorndike Laboratories of the Boston City Hospital, where his former chief, Dr. George Minot, won the Nobel Prize for his work on the anemias and discovery of effective treatment for the previously fatal pernicious anemia. I also am gratified by the very high caliber of the young physicians whom Dr. Davidson is attracting and who have expressed their interest in joining us when he does.

It is in this area that the only increase in our budget is requested. Included is the minimal staffing of physician investigators and their assistants along with the nurses and dietitians required for the first year of operation.

Dr. Davidson's special interest at the moment is in the diseases of the liver, diseases such as cirrhosis, and that undoubtedly will represent one of our areas of research. Another area is one in which I am sure we can write a brand new chapter in the next textbooks of medicine. We shall have a respiratory chamber in our clinical laboratory and with this apparatus shall measure the total energy exchange—all the oxygen that the body uses for long periods of time—a week or more. This is badly needed to obtain new knowledge about the so-called wasting diseases. We also shall be actively engaged in studies of arthritis, the effects of new drugs on this disease, as we or others may develop new drugs, and studies of the basic nature of the several forms of rheumatism. This will complete our starting plan, at least.

Our third division is headed by my Associate Director, Dr. Floyd S. Daft, whose reputation in national scientific circles attests to the excellent opportunities for development in science provided by the laboratories of the Public Health Service. Dr. Daft holds the grade of scientist director in the commissioned corps of the service.

This Division is composed of the basic science laboratories of chemistry, biochemistry, pathology, and biophysics, which formerly were separate segments of the National Institutes of Health. The research accomplishments in these major scientific discipliines has been reported to you from year to year. It has been outstanding and continues so.

The Paul Lewis award, symbolic of the most important research of the year in enzyme chemistry, was awarded this year, for the second year in succession, to a member of one of these laboratories. You have heard of tomatadine, obtained from the tomato plant by the Department of Agriculture. Out of this our chemists have prepared pregnenalone, from which other steroid hormones can be made, even cortisone. Compound F has recently been synthesized through the action of adrenal enzymes on the soybean. Steroids also have been isolated from yams and other plants which grow in our Southwestern States. Many other projects deserve mention, but time is pressing.

I especially want to express appreciation for the generous support voted by Congress 2 years ago for studies in cortisone and ACTH. Money can save time, as this illustrates. In the short time since those funds were made available as grants, the value of these drugs has been extensively explored. Safer methods for their use have been developed: their areas of usefulness have been delineated, and we know now what we might have had to wait 10 years to learn without that stimulation.

With the help of cortisone, which is normally secreted by the adrenal glands or with the adrenal cortex stimulating hormone, ACTH, rheumatoid arthritis can be treated much more effectively than was possible before. The same is true for rheumatic fever, for certain inflamations of the eye, for asthma and other allergies, and for certain diseases of the skin. A recent study has revealed that undesirable effects can be avoided if the patient who receives them is selected properly. He should not be suffering from tuberculosis or with mental disease. Also dosage must be carefully adjusted to avoid some undesirable effects which would result from overtreatment.

Other immensely important facts have also been forthcoming. With cortisone, a man can be kept living after removal of his own adrenal glands, and removal of these glands has been found to be of value in those severe forms of high blood pressure which threatens life; also in motastatic—that is to say, late inoperable cancer—of the prostate gland in men and of the breast in women.

Notable progress has been made in the search for cheaper sources of these drugs. ACTH is made from the pituitary glands of cattle, and this source is meager. As usually prepared, it is a substance of high molecular weight—about 20,000—far beyond the reach of the present-day chemical production. Our grantees have found, however, that a fraction of this molecule, the business end, can be separated from the rest, and that this fraction has a molecular weight of such size as to give us hope for its ultimate production chemically.

Cortisone, formerly called compound E, as I have said, is manufactured in the body by the cortex of the adrenal gland. So is compound F, or hydrocortisone, which acts like cortisone but has been shown to be more effective than cortisone when applied locally as it may be to the eye or in a single joint. In the manufacture of these substances, the chemists' starting point was bile, which is not abundant. This has prompted an extensive search for other starting materials, and in this search, our chemists at Bethesda, working under Dr. Erich Mosettig, have been active. They have, as I have said, prepared pregnenalone from tomatadine, which can be obtained in large amounts from the foliage of the tomato plant. Pregnenalone has been thought to have effects like cortisone. This seems not to be true, but from pregnenalone the chemist can prepare a number of so-called steroids, such as testosterone, the male sex hormone, and even cortisone.

Our chemists have produced compound F through the action on soybeans of an enzyme they separated from adrenal glands. This is of more theoretical than practical interest, and more significant, perhaps, is the steady progress they are making in the chemical production of steroids from yams and other plants—which can be grown in our Southwestern States—and from yeasts which could be made available in unlimited supply.

Among other accomplishments of our laboratories at Bethesda are several which would interest you. One of these is the isolation by Drs. Keresztesy and Silverman in pure form of a new B vitamin, the citrovorum factors. This vitamin is closely related chemically to folic acid, but more active in the laboratory. Its main clinical use will probably be in diminishing the harmful effects of antagonists to folic acid which now are used extensively to prolong the life of leukemia patients. Also of great promise is a method for separating blood platelets from the blood and preserving them for later injection into bleeding patients. One of the principal hazards from atomic irradiation is bleeding. It has long been known that one of the results of radiation is a decrease in the circulating platelets, colorless disk-shaped corpuscles found in the blood of all

animals. Well, injecting the previously isolated platelets into dogs that were bleeding after radiation stopped the bleeding and prevented death. The study now must be extended to man. Situations such as this are why we need the clinical center in operation. For example, one of our grantees working in a distant hospital, has given human platelets to four patients suffering with aplastic anemia, and their bleeding was controlled.

N-allylnormorphine—a derivative of morphine—was made some 10 years ago by chemists in Merck & Co. Although it was known to be a morphine antagonist, it attracted little attention until recently when Dr. Isbell at the Public Health Service Hospital in Lexington, Ky., administered it to two patients who were dying of morphine poisoning with promptly curative effects. In the meantime Dr. Franklin Snyder, one of our grantees, an obstetrician at Harvard Medical School, was studying the possible advantage of several of the new synthetic substitutes for morphone—methandon, isomethadon, and demerol. Like morphine, however, they proved to be dangerously depressing to the respiration of the newborn infant. It then occurred to Dr. Nathan Eddy of our Laboratory of Chemistry that N-allyl given to the mother at the end of labor or injected into the umbilical vein of the newborn baby might restore the baby. At his suggestion this was tried by Dr. Snyder, first on rabbits, then in the clinic, and it worked. The drug is now awaiting release by the Food and Drug Administration. It promises to prove a godsend in obstetrics—permitting the control of pain without danger to the baby.

One of the more esoteric regions in our laboratories is the section of Dr. Kornberg, an enzymologist of great repute among his peers. Enzymes are organic catalysts. One or another enzyme is involved at almost every chemical step by which the foods we eat are utilized and other chemical transformations are effected. The findings of Dr. Kornberg and his associates are revealing many of the secrets of metabolism and in time will lead to a better understanding of the changes in metabolism resulting from disease.

Cortisone, in addition to its many other fields of usefulness has been shown by Dr. Schwarz of our Laboratory of Biochemistry and Nutrition to inhibit the development of dietary liver necrosis, a condition which resembles acute yellow atrophy and severe cases of epidemic hepatitis. Compound F is even more effective.

In the field of diabetes, the research of Dr. Evelyn Anderson in our Bethesda laboratories should be noted. She and her associates are finding that experimental lesions made at certain levels of the base of the brain of experimental animals, raise the amount of the sugar of the blood and provoke excretion of sugar in the urine, as occurs in diabetes. These effects persist for a month or longer. The duration is important because Claude Bernard 100 years ago provoked a short-lived abnormality of this kind by surgical injury of the brain at a lower level. Other disturbances can also be produced by these technics. Here then is evidence that nerve centers in the brain affect metabolism. Here indeed is an attempt to bring psychosomatic medicine down to earth—to give it an organic explanation.

Many other studies deserve mention, but time is pressing. I can assure you gentlemen that a day spent in any of these laboratories at Bethesda is a thrilling experience; that the atmosphere out there—for scientists at least—is powerfully stimulating, and that I, coming into the Government from civilian life, have been tremendously impressed by the quality of the work done in this and the other institutes located there.

Dr. SEBRELL. I am particularly familiar with his institute because, as you know, my own field is metabolic diseases and nutrition and before becoming Director of the National Institute of Health it was this field in which I was interested.

DIVISIONAL STRUCTURE OF THE INSTITUTE

I won't try to duplicate his statement. I would just like to mention very briefly in his absence some of the things he had in mind.

RESEARCH GRANTS DIVISION

He has set his institute up in three divisions, one under Dr. Ralph E. Knutti, who comes from the University of Southern California and was formerly with the Rockefeller Institute, and who heads the section of research grants and fellowships.

CLINICAL RESEARCH DIVISION

His second section is clinical research and he has Dr. Charles S. Davidson, from the Thorndike Laboratories of the Boston City Hospital. He is a specialist in anaemia and diseases of the blood and is working in diseases of the liver, such as hepatitis and cirrhosis. He was trained under Dr. Minot, the Nobel prize winner for the discovery of liver extracts in the treatment of pernicious anaemia.

LABORATORY RESEARCH DIVISION

The third division is headed by the associate director, Dr. Floyd S. Daft, who will direct the laboratory research which is rather extensive and involves a great range. One thing is the new use of a drug called N-allylnormorphine. One of the Public Health scientists has recently discovered that this compound has saved the lives of two people on the verge of death from morphine poisoning. In addition to its use there it possibly has another very important use. In childbirth you are unable to use any considerable amount of narcotic because of the poisoning effect on the child.

With the use of this compound it seems quite possible that you can use morphine in childbirth and by the use of N-allynormorphine in the infant, use morphine in the mother without endangering the life of the infant. This is being tried out now.

PROGRESS IN RESEARCH

Another interesting line of investigation is the effect in the nervous system on metabolic diseases. One of the scientists at Bethesda has shown that by injuring the brains of experimental animals at certain spots it is possible to raise the blood sugar and by changing the amount of sugar in the blood simulate a condition of diabetes which opens up a field of investigation into the relation between neurological and mental diseases and such organic diseases as diabetes.

Another interesting development is the use of blood platelets in hemorrhagic diseases. This has great significance because the cause of death in injuries from radiation is very frequently uncontrollable hemorrhages. These blood platelets can be separated from blood and used for transfusion and, apparently, injection of the platelets will prevent this type of death.

This is something to investigate further.

I won't mention more of the activities of this particular institute at this time. The scientific output of the National Institutes of Health is shown here, Mr. Chairman, in the form of reprints of the scientific papers published during the last year in order that you might see the volume of scientific work that comes out of the institute. I have an index to these publications showing the list of titles and the authors if the committee wishes to see them.

SUCCESSFUL USE OF CORTISONE AND ACTH

Mr. FOGARTY. Dr. Sebrell, before you move on in the field of arthritis and especially rheumatoid arthritis, are cortisone and ACTH treatments as successful as you expected a few years ago?

Dr. SEBRELL. The developments have been truly remarkable and I think a great deal of the rapidity with which the tremendous value of cortisone and the number of diseases discovered to be benefited by it has been due to the appropriations made by this committee to support the work in this field, not only in rheumatoid arthritis but in a number of other diseases. These compounds are proving to be truly life-saving.

DISCOVERY OF NEW METHOD OF PREPARING COMPOUND F

In that connection one of our men in the Arthritis Institute has discovered a way of making compound F which Dr. Scheele mentioned, another name for which is hydrocortisone and this is probably the active compound. He has made this compound out of a soybean preparation and an enzyme. It can be made in other ways and, if not already available, it soon will be available for better treatment of arthritis and some other uses.

Compound F has a very remarkable local effect. It is particularly helpful by injection into the joints for arthritis and into the eye for eye diseases.

A great deal of work continues in this field because the full use of these compounds still has not been determined by any means.

The removal of adrenal glands, as Dr. Scheele mentioned in his testimony, for the first time offers some hope in certain cases of cancer.

EFFECT OF EXPERIMENTAL COMPOUNDS ON PEOPLE

Mr. FOGARTY. What is the effect of these drugs on people?

Dr. SEBRELL. They do not cure arthritis. They give a tremendous amount of relief and people who had immovable joints, who could not close their hands, who were in great and continuing pain are relieved as long as they continue to take this drug. If you stop the drug they usually go back as bad or worse than before. We still do now know the cause of arthritis. The drug is a wonderful means of rehabilitation because it makes these people comfortable and many of them can go back to work for the first time in many years.

Mr. FOGARTY. Are there any bad side effects?

Dr. SEBRELL. There have been some bad effects reported. It has to be used with caution. It should not be used indiscriminately and should not be used in all cases of arthritis. I just had a conversation with Dr. Hench who is constantly working in improving the dosage. The smaller the dose in properly selected cases the less serious the effects.

In the early days when the proper doses had not been determined there were some rather serious ill effects. According to Dr. Hench it is still an experimental drug and we still do not know the best way to select the cases and to use it and I am quite sure he would say you should not use it indiscriminately at this stage of our knowledge.

STATUS OF SYNTHETIC PREPARATION OF CORTISONE AND ACTH

Mr. FOGARTY. Do you manufacture it synthetically at this time?

Dr. SEBRELL. Not completely synthetically. The starting material was bile. It is still bile. I believe it is possible to do it synthetically but so far as I know that is not the commercial way of making it now.

PRINCIPAL MANUFACTURERS

Mr. FOGARTY. What people manufacture it?

Dr. SEBRELL. The principal manufacturer of cortisone is Merck & Co., and of ACTH the Armour Co.

COST

Mr. FOGARTY. Has the cost come down?

Dr. SEBRELL. It has been reduced very considerably.

Dr. TOPPING. About one-tenth. That is what it was at the time the appropriation was made. That was 2 years ago. It was $225 a gram and I have the last figure—$20 to $25 a gram. That was once $10 a dose. It is now about $1 a dose.

FURTHER ATTEMPTS TO REDUCE COST OF ACTH AND CORTISONE

Mr. DENTON. Is there an attempt being made to further reduce the cost of it?

Dr. SEBRELL. Some of our men have been trying to synthesize it and to find new sources. There are a number of possible plant sources. Some of the yams that grow in Mexico can be grown in the South and Southwest of the United States. They have compounds in them that could possibly be converted into cortisone. Some of our chemists are looking for ways of converting these compounds into cortisone. Our men working with the Department of Agriculture have a product called tomatidine from tomato vines from which they can now make a sex hormone and they think they can make that into cortisone.

What we have in mind is to find a cheap plant source. When bile is the source your are limited to packing house material. The cost is high. If we can find a plant as a suitable source of cortisone we can have a cheap supply. We have men working on that now. As I mentioned earlier one of our men has synthesized compound F from soybeans and an extract of adrenal glands.

Mr. DENTON. Was Julian working on that?

Dr. SEBRELL. Yes. He is with the Glidden Co. and he reported he could make cortisone from a soybean extract. On paper it can be done but so far as I know the Glidden Co. is not producing it commercially.

Well, Mr. Chairman, if I may move on to the discussion of the clinical site—you are all familiar with that.

GRANTS MADE BY INSTITUTES FOR RESEARCH AND TRAINING

Mr. FOGARTY. Before you go into that, Doctor, I would like to get into the record this year a complete breakdown of the grants made by each of these institutes including research grants and fellowship awards.

Dr. SEBRELL. Arthritis and Metabolic Diseases, Neurology and Blindness, and Microbiological. We will supply that for the record.

Mr. FOGARTY. Show that by school.

Dr. SEBRELL. The schools that are getting support from the grants; yes.

We will give you a complete breakdown of the funds granted to each medical school and university.

Mr. FOGARTY. Then immediately following those tables insert an explanation of the research grant procedure and a list of the advisory councils and study sections under this appropriation.

(The statements referred to follow:)

	Arthritis and metabolic diseases	Microbiological Institute	Neurological diseases and blindness	General grants and fellowships	Total National Institutes of Health appropriation
GRANTS					
Research grants	$1,345,000	$1,950,000	$1,015,000	$4,290,000	$8,600,000
Research fellowships	76,900	120,000	51,400	400,700	649,000
Training stipends	50,000		36,000		86,000
Total grants	1,471,900	2,070,000	1,102,400	4,690,700	9,335,000
DIRECT OPERATIONS					
Research:					
Basic	1,850,000	2,405,000	75,000		4,330,000
Supporting research services					[1] 1,134,920
Total basic research	1,850,000	2,405,000	75,000		5,464,920
Clinical Center:					
Clinical investigations	210,000	35,000	45,000		290,000
Visiting scientist	7,000	7,000	7,500		21,500
Patient care					[1] 650,000
Supporting research services					[1] 206,500
Housing					20,000
Relocation of projects	12,900	21,400	10,300		44,600
Total Clinical Center	229,900	63,400	62,800		1,232,600
Total research	2,079,900	2,468,400	137,800		6,697,520
Review and approval of grants					[2] 618,480
Administration: Central					[3] 225,000
Total administration					225,000
Total direct operations	2,079,900	2,468,400	137,800		7,541,000
Total funds for program performance	3,551,800	4,538,400	1,240,200	4,690,700	16,876,000
Total 1953 budget request	3,551,800	4,538,400	1,240,200	4,690,700	16,876,000

[1] Represents central laboratory, technical and patient care services in support of the basic and clinical research programs of the above 3 institutes.

[2] Covers costs of review and approval of grants for the above 3 institutes and costs of grants and fellowship services for all institutes.

[3] Provides over-all executive direction for this Bureau and central administrative services to the 3 institutes financed under this appropriation.

National Institutes of Health research grants approved for payment from fiscal year 1951 funds by State and institution

	Total		Arthritis and metabolic diseases		Neurological diseases and blindness		Microbiological		Division of research grants (noncategorical)	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Grand total	[1] 843	$8,144,778	46	$704,996	50	$491,222	152	$1,434,943	595	$5,513,617
Alabama	3	16,834							3	16,834
University of Alabama	2	13,834							2	13,834
Tuskegee Institute	1	3,000							1	3,000
Arizona: University of Arizona	1	15,500							1	15,500
Arkansas: University of Arkansas	4	25,540							4	25,540
California	60	666,111	2	13,968	5	45,320	12	142,872	41	463,951
University of California, Berkeley	22	267,447			1	16,204	5	56,751	16	194,492
University of California, Los Angeles	9	87,266			3	17,236	2	37,539	4	32,491
Cedars of Lebanon Hospital	3	19,638	1	3,600					2	16,038
Medical Evangelists College	1	7,220							1	7,220
Mount Zion Hospital	1	9,400							1	9,400
Olive View Sanatorium	1	8,064							1	8,064
California Department of Public Health	1	2,500					1	2,500		
Scripps Metabolic Clinic	1	18,306							1	18,306
University of Southern California	6	55,212					2	15,680	4	39,532
Stanford University	8	105,840	1	10,368	1	11,880	2	30,402	4	53,190
California Institute of Technology	5	74,414							5	74,414
San Diego State College	1	6,804							1	6,804
Immaculate Heart College	1	4,000							1	4,000
Colorado: University of Colorado	6	106,124	1	12,425			1	11,777	4	81,922
Connecticut	23	207,000			2	19,388	4	38,597	17	149,015
New Britain General Hospital	1	15,000					1	15,000		
Yale University	20	174,793			2	19,388	3	23,597	15	131,808
Wesleyan University	1	9,882							1	9,882
Individual grants	1	7,325							1	7,325
Delaware: Memorial Hospital, Delaware	1	25,398							1	25,398

[1] These grants are distributed among 200 institutions in 43 States, District of Columbia, 1 Territory, and 13 foreign countries.

National Institutes of Health research grants approved for payment from fiscal year 1951 funds by State and institution—Continued

	Total		Arthritis and metabolic diseases		Neurological diseases and blindness		Microbiological		Division of research grants (noncategorical)	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
District of Columbia	15	$100,187			1	$6,693	4	$26,451	10	$67,043
Carnegie Institute of District of Columbia	2	15,100					1	6,600	1	8,500
Children's Hospital	1	4,946					1	4,946		
Georgetown University	2	13,281			1	6,693			1	6,588
George Washington University, Warwick Clinic	3	9,742					1	2,246	2	7,496
Howard University	4	46,118					1	12,659	3	33,459
National Academy of Sciences	3	11,000							3	11,000
Florida	6	34,700			1	2,000	1	6,425	4	26,275
University of Florida	1	6,425					1	6,425		
University of Miami	1	5,400							1	5,400
Yerkes Laboratories, Primate Biology	1	2,000			1	2,000				
Florida State University	3	20,875							3	20,875
Georgia	12	95,017	1	10,000			4	34,521	7	50,496
Emory University	8	57,315					2	16,053	6	41,262
Georgia Institute of Technology	2	21,222					1	11,988	1	9,234
University of Georgia	2	16,480	1	10,000			1	6,480		
Idaho	2	10,368							2	10,368
Idaho State College	1	8,100							1	8,100
Idaho University	1	2,268							1	2,268
Illinois	80	712,949	3	76,084	8	59,907	13	104,378	56	472,580
University of Chicago	38	289,955	2	7,936	5	15,201	7	64,227	26	202,591
Illinois Masonic Hospital Association	1	6,100			1	6,100				
University of Illinois	17	162,423			3	34,106	1	3,155	13	125,162
Committee on Chronic Illness	1	10,000							1	10,000
Michael Reese Hospital	6	92,599	1	68,148			1	4,903	4	19,548
Northwestern University	9	104,813					3	30,907	6	73,906
Chicago Medical Schools	2	8,439			1	4,500			1	3,939
La Rabida Sanatorium	1	20,476							1	20,476
Roosevelt College of Chicago	1	1,186					1	1,186		
Federation of Sewage and Industrial Wastes Association	1	2,808							1	2,808
Individual grants	3	14,150							3	14,150
Indiana	6	37,184					1	2,192	5	34,992

Roosevelt College of Chicago	1	1,186							1	1,186	1	20,476
Federation of Sewage and Industrial Wastes Association	1	2,808									1	2,808
Individual grants	3	14,150									3	14,150
Indiana	6	37,184					1	3,132	5	34,052		
University of Indiana	3	14,731					1	3,132	2	11,599		
Purdue University	3	22,453							3	22,453		
Iowa	14	90,936					4	22,362	10	68,574		
State University of Iowa	9	53,298					2	5,562	7	47,736		
Iowa State Agriculture and Mechanic Arts College	5	37,638					2	16,800	3	20,838		
Kansas	12	66,898			1	3,564	4	10,243	7	53,091		
University of Kansas	10	63,538			1	3,564	3	9,243	6	50,731		
Kansas State College	2	3,360					1	1,000	1	2,360		
Kentucky: University of Louisville	3	24,562					1	11,624	2	12,938		
Louisiana	10	151,332	1	30,132			1	2,700	8	118,500		
Louisiana State University	2	10,034							2	10,034		
Tulane University	7	133,798	1	30,132			1	2,700	5	100,966		
Individual grants	1	7,500							1	7,500		
Maine: R. B. Jackson Memorial Laboratory	1	8,380					1	8,380				
Maryland	39	390,412			4	41,523	11	111,982	24	236,907		
Johns Hopkins University	29	340,865			4	41,523	8	96,258	17	203,084		
University of Maryland	6	29,547					3	15,724	3	13,823		
Individual grants	4	20,000							4	20,000		
Massachusetts	82	1,054,954	9	127,177	4	46,526	11	173,550	58	707,701		
Boston Dispensary	1	7,000							1	7,000		
Boston University	2	14,380					1	8,380	1	6,000		
Children's Medical Center	5	90,443			2	18,117			3	72,326		
Harvard University	39	512,483	2	35,584	1	4,410	8	138,602	28	333,887		
Robert B. Brigham Hospital	3	18,203	3	18,203								
Massachusetts General Hospital	10	111,043	3	51,790					7	59,253		
Massachusetts Institute of Technology	7	63,030			1	23,999	1	7,938	5	31,093		
Massachusetts Memorial Hospital	1	15,120							1	15,120		
New England Medical Center	2	22,140	1	21,600					1	540		
Worcester Foundation	4	89,438							4	89,438		
Tufts College	2	8,100							2	8,100		
P. B. Brigham Hospital	1	19,044							1	19,044		
American Gastroenterological Association	1	5,000							1	5,000		
Lahey Clinic	1	1,500							1	1,500		
House of Good Samaritans	2	59,400							2	59,400		
Woodshole Ocean Institute	1	18,630					1	18,630				

National Institutes of Health research grants approved for payment from fiscal year 1951 funds by State and institution—Continued

	Total		Arthritis and metabolic diseases		Neurological diseases and blindness		Microbiological		Division of research grants (noncategorical)	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Michigan	23	$214,491	3		68,397		3	$15,896	17	$130,198
University of Michigan	12	129,293	2	$57,261			2	12,096	8	59,936
Wayne University	6	53,262					1	3,800	5	49,462
Harper Hospital	1	11,136	1	11,136						
Individual grants	4	20,800							4	20,800
Minnesota	25	205,704			1	$7,673	2	23,772	22	174,259
University of Minnesota	24	201,704			1	7,673	2	23,772	21	170,259
Individual grants	1	4,000							1	4,000
Missouri	22	127,855	1	4,800	1	10,000	4	26,177	16	86,878
Kirksville College	1	10,000			1	10,000				
University of Missouri	2	13,259							2	13,259
St. Louis University	1	10,480					1	10,480		
Washington University	18	94,116	1	4,800			3	15,697	14	73,619
Montana: Montana State University	1	1,000					1	1,000		
Nebraska	3	28,760					1	10,260	2	18,500
Creighton University	1	10,000							1	10,000
University of Nebraska	2	18,760					1	10,260	1	8,500
New Hampshire: University of New Hampshire	1	5,832					1	5,832		
New Jersey: Rutgers University	7	32,660					3	16,426	4	16,234
New York	136	1,541,204	9	151,988	10	146,818	20	237,310	97	1,005,088
Union College and University	2	11,817							2	11,817
American Heart Association	1	55,490							1	55,490
American Public Health Association	1	31,050							1	31,050
University of Buffalo	1	5,932							1	5,932
New York City Department of Hospitals	1	3,300							1	3,300
Columbia University	43	520,724	2	41,706	6	119,502	6	58,260	29	301,256
Cornell University	18	191,162	1	9,450	3	19,666	4	37,674	10	124,372
American Society of Heating and Ventilating Engineers	1	4,882							1	4,882
Alfred University	1	1,600							1	1,600
Grassland Hospital	1	6,215							1	6,251
Roosevelt Hospital	2	11,950	1	10,000					1	1,950
Hospital for Special Surgery	2	57,038							2	57,038
	5	42,446					2	25,307	3	17,139

American Society of Heating and Ventilating Engineers	1	4,882							1	4,882
Alfred University	1	1,600							1	1,600
Grassland Hospital	1	6,215							1	6,251
Roosevelt Hospital	2	11,950	1	10,000					1	1,950
Hospital for Special Surgery	2	57,038							2	57,038
State University of New York	5	42,446					2	25,307	3	17,139
Memorial Hospital	1	22,775							1	22,775
Beth-El Hospital	1	4,714							1	4,714
Montefiore Hospital	3	11,540	1	5,000					2	6,540
Mount Sinai Hospital	8	94,150	1	28,000					7	66,150
National Organization for Public Health Nursing	1	15,415							1	15,415
New York Medical College	1	31,752							1	31,752
New York State Department of Health	2	34,919					2	34,919		
New York State Psychiatric Institute	1	7,650			1	7,650				
New York University	17	212,442	3	57,832			2	37,096	12	117,514
University of Rochester	8	71,728					2	14,958	6	56,770
St. Clare Hospital	1	3,400							1	3,400
Trudeau Foundation	2	39,411					1	25,596	1	13,815
Waldemar Medical Research Foundation	1	6,642							1	6,642
Polytechnic Institute, Brooklyn	1	5,238							1	5,238
Staten Island Zoo	1	1,700							1	1,700
Barnard College	1	610							1	610
Irvington House	1	1,512							1	1,512
Individual grants	6	32,000					1	3,506	5	28,500
North Carolina	19	149,500	2	11,331			2	9,126	15	129,043
Duke University	10	74,918	1	3,555			1	4,914	8	66,449
University of North Carolina	3	31,808							3	31,808
Wake Forest-Bowman Gray	5	38,562	1	7,776					4	30,786
North Carolina State College	1	4,212					1	4,212		
Ohio	24	257,600	3	25,886	1	6,000	4	83,506	16	142,208
Christ Hospital, Cincinnati	1	39,520					1	39,520		
University of Cincinnati	2	17,118							2	17,118
Jewish Hospital, May Institute of Medical Research	1	10,000	1	10,000						
Committee on Research Development N. B. P	1	18,788							1	18,788
Ohio State University	7	46,055	1	4,104					6	41,951
Western Reserve University	9	115,519	1	11,782	1	6,000	2	40,986	5	56,751
Miami University	1	3,000					1	3,000		
Mount Sinai Hospital	1	600							1	600
Individual grants	1	7,000							1	7,000
Oklahoma	3	11,295					1	3,000	2	8,295
Oklahoma Agricultural and Mechanical College	2	6,500					1	3,000	1	3,500
University of Oklahoma	1	4,795							1	4,795
Oregon	7	28,086			1	8,000	1	3,233	5	16,853
University of Oregon	3	13,684			1	8,000			2	5,684
Oregon State College	4	14,402					1	3,233	3	11,169

National Institutes of Health research grants approved for payment from fiscal year 1951 funds by State and institution—Continued

	Total		Arthritis and metabolic diseases		Neurological diseases and blindness		Microbiological		Division of research grants (noncategorical)	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Pennsylvania	57	$474,134	3	$20,489	4	$32,327	13	$124,677	37	$296,641
Children's Hospital, Philadelphia	3	108,540					2	26,892	1	81,648
Mt. Sinai Hospital, Philadelphia	1	7,776							1	7,776
Hahnemann Medical College and Hospital	1	4,860					1	4,860		
Academy of Natural Sciences	1	15,633					1	15,633		
Jefferson Medical College	9	51,007							9	51,007
Jewish Hospital	1	10,076							1	10,076
Pennsylvania State College	2	15,076	1	12,096					1	2,980
University of Pennsylvania	21	163,039	1	7,533	2	13,177	3	31,104	15	111,225
University of Pittsburgh	7	25,298					2	12,069	5	13,229
Temple University	1	9,010					1	9,010		
Wills Hospital	2	19,150			2	19,150				
Woman's Medical College of Philadelphia	4	17,469	1	860			2	14,109	1	2,500
Children's Hospital, Pittsburgh	1	11,000					1	11,000		
Individual grants	3	16,200							3	16,200
Rhode Island	6	28,868					1	4,303	5	24,565
Brown University	4	18,543					1	4,303	3	14,240
Rhode Island State College	1	1,325							1	1,325
Individual grants	1	9,000							1	9,000
South Carolina: South Carolina State Medical College	3	18,322					1	9,379	2	8,943
South Dakota: University of South Dakota	4	16,694							4	16,694
Tennessee	19	131,895	2	10,888	2	11,326	3	15,330	12	94,351
Meharry Medical College	2	14,089							2	14,089
University of Tennessee	7	44,623			1	3,302			6	41,321
Vanderbilt University	9	54,088	2	10,888	1	8,024	3	15,330	3	19,846
Tennessee Department of Public Health	1	19,095							1	19,095
Texas	22	149,875	2	10,770			6	31,936	14	107,169
Prairie View Agricultural and Mechanical College	1	5,100							1	5,100
Abilene Christian College	2	6,863							2	6,863
North Texas State Teachers College	1	6,804							1	6,804
Texas Agricultural and Mechanical College	2	9,250							2	9,250
Texas State Board of Health	2	11,200					2	11,200		
University of Texas	9	46,032	2	10,770			4	20,736	3	14,526
Southwestern Medical School	4	57,126							4	57,126
	1	7,500							1	7,500

North Texas State Teachers College	1	6,804							1	6,804
Texas Agricultural and Mechanical College	2	9,250							2	9,250
Texas State Board of Health	2	11,200					2	11,200		
University of Texas	9	46,032	2	10,770			4	20,736	3	14,526
Southwestern Medical School	4	57,126							4	57,126
Individual grants	1	7,500							1	7,500
Utah	17	336,523	2	108,900	1	20,325	1	3,056	13	204,242
Brigham Young University	1	3,056					1	3,056		
University of Utah	15	316,727	2	108,900	1	20,325			12	187,502
Utah State Agricultural College and Experiment Station	1	16,740							1	16,740
Vermont: University of Vermont	1	3,348			1	3,348				
Virginia	7	100,149							7	100,149
Virginia Medical College	2	74,597							2	74,597
University of Virginia	5	25,552							5	25,552
Washington	14	130,317	1	19,261	1	16,262	1	6,264	11	88,530
Washington State College	3	26,761					1	6,264	2	20,497
University of Washington	11	103,556	1	19,261	1	16,262			9	68,033
West Virginia: University of West Virginia	1	4,200					1	4,200		
Wisconsin	21	137,654					5	25,436	16	112,218
Marquette University	4	22,491							4	22,491
University of Wisconsin	17	115,163					5	25,436	12	89,727
Philippines: Manila Department of Health	1	3,200					1	3,200		
Canada: University of Montreal	1	15,012							1	15,012
British Isles	3	4,500							3	4,500
Cambridge University	1	500							1	500
Great Britain Medical Research Council	1	3,500							1	3,500
University of London	1	500							1	500
Belgium: Brussels University	1	518							1	518
Lebanon: American University of Beirut	1	4,720							1	4,720
Puerto Rico: University of Puerto Rico	3	25,822			1	4,222			2	21,600
Guatemala: Pan American Sanitary Bureau	1	47,150					1	47,150		
France: University of Paris	1	540							1	540
Norway: Helsederektoratet	2	15,480					2	15,480		
Denmark: Carlsberg Foundation	1	540							1	540
Argentina: Instituto Biologica Medica Experimenta	1	2,500	1	2,500						
Sweden: Wenner Grens Institut	1	540							1	540
Peru: Universidad Nacional de San Marcos	2	47,404							2	47,404
Switzerland: Eidgenossiche Technische Hochschule	1	500							1	500

National Institutes of Health (noncategorical) fellowships awards,[1] approved for payment from fiscal year 1951 funds[2]

State and institution	Number	Amount
Total	181	$494,690
California	24	69,043
University of California, Berkeley	8	25,595
University of California, Los Angeles	6	14,020
University of Southern California	2	2,925
Stanford University	4	12,687
California Institute of Technology	4	13,816
Colorado: University of Colorado	2	3,755
Connecticut: Yale University	4	10,790
Florida: Florida State University	1	2,350
Illinois	15	38,264
University of Chicago	9	24,314
University of Illinois	2	4,700
Michael Reese Hospital	1	3,000
Northwestern University	3	6,250
Indiana	5	10,950
University of Indiana	2	4,300
University of Notre Dame	1	1,950
Purdue University	2	4,700
Iowa	3	6,163
State University of Iowa	2	4,700
Iowa State Agriculture and Mechanical Arts College	1	1,463
Kansas	2	3,900
University of Kansas	1	2,350
Kansas State College	1	1,550
Louisiana: Tulane University	1	2,532
Maryland	5	12,413
Johns Hopkins University	2	5,950
University of Maryland	3	6,463
Massachusetts	32	98,280
Boston University	1	2,380
Children's Medical Center, Boston	2	9,250
Harvard	22	63,336
Massachusetts General Hospital	2	6,900
Massachusetts Institute of Technology	2	6,159
New England Medical Center	1	3,300
Tufts College	1	3,355
Peter Bent Brigham Hospital	1	3,600
Michigan: University of Michigan	1	3,600
Missouri	5	$14,257
University of Missouri	2	2,757
Washington University	3	11,500
New Jersey: Princeton University	2	6,250
New York	16	44,306
Columbia University	4	9,550
Cornell University	4	8,056
Memorial Hospital for Treatment of Cancer	2	8,400
New York University	3	9,750
University of Rochester	1	1,950
Rockefeller Institute for Medical Research	1	3,000
Public Health Service, TB Research Laboratory	1	3,600
North Carolina: Duke University	3	8,484
Ohio	9	23,099
Ohio State University	2	4,711
Western Reserve University	7	18,388
Oklahoma: University of Oklahoma	1	1,950
Oregon: University of Oregon	1	3,600
Pennsylvania	13	35,158
Jefferson Medical College	2	7,500
Pennsylvania State College	1	907
University of Pennsylvania	10	26,751
Tennessee	5	15,300
University of Tennessee	2	3,900
Vanderbilt University	3	11,400
Utah: University of Utah	2	6,718
Washington: University of Washington	4	13,470
Wisconsin: University of Wisconsin	9	16,775
British Isles	5	15,467
Cambridge University	2	8,600
Great Britain Medical Research Council	1	2,549
University of London	2	4,318
Belgium: University of Brussels	1	426
France: University of Paris	1	3,896
Denmark: Carlsberg Foundation	1	317
Sweden: Wenner Grens Institut	1	3,938
Switzerland: Eidgenessische Technische Hochscule	1	3,340
Fellows in U. S. Government institutions	6	15,809

[1] These 181 awards are distributed among 24 States and 6 foreign countries.
[2] Separate allotments for fellowships in arthritis, neurology, and microbiology not established until beginning of fiscal year 1952.

Research Grant Procedure

The research-grant programs of the National Institute of Health are administered under a system of review and approval by legally authorized national advisory councils. The National Advisory Councils were established through Congressional acts; therefore, each has a legal responsibility for advising the Surgeon General on applications for research grants in its particular field. For

example, all research grants in the field of neurology are reviewed by the National Advisory Neurological Diseases and Blindness Council. The National Advisory Health Council is responsible for both the microbiological program, and for the general problems in basic research which may not appropriately be considered by any of the other councils. In addition to the review and recommendation on applications for research grants, each council advises the Surgeon General on questions of general interest to the Public Health Service.

The law provided that each of the advisory councils shall include 12 official members, at least 6 of whom shall be professional. It also provides for rotation of membership, with no council member serving longer than 4 years. Members are ineligible for reappointment to the same council for a period of 1 year. Terms expire on September 30. Councils meet three times a year.

In order that the National Institute of Health might provide the best possible technical evaluation and advice to these councils, outstanding authorities in the major fields of medical research have been appointed as members of special study sections. Most of the members are nongovernment scientists selected on a Nation-wide basis. Effective liaison with other Government agencies having similar programs is maintained, however, through appointment of scientists from these agencies as full members of the sections. The study sections have accepted the responsibility (*a*) for reviewing applications for research grants in their respective fields, and forwarding their recommendations to the appropriate national advisory council and (*b*) for surveying, as scientific leaders, the status of research in their fields in order to determine areas in which research activities should be initiated or expanded.

Each study section meets approximately 6 weeks prior to the regularly scheduled meetings of the national advisory councils and provides technical advice to the seven councils.

The following rules govern tenure of study section members:

A. The term of all new appointments to the various study sections shall be for 4 years except where the appointment is made to fill an unexpired term.

B. When new study sections are established, or when appointments are made to fill unexpired terms, no new member will be asked to serve less than 2 years.

C. Chairmen of study sections are appointed for a maximum of 3 years.

D. All study section terms expire on December 31.

E. Retiring study section members are ineligible for reappointment to the same study section for a period of 1 year.

F. No study section member may serve on a study section and a national advisory council at the same time .

The following lists contain the current membership of the three National Advisory Councils serving this appropriation and, in addition a complete roster of Study Section members serving all advisory councils.

NATIONAL ADVISORY HEALTH COUNCIL

Mr. David C. Crockett, associate director, Massachusetts General Hospital, 45 Milk Street, Boston, Mass. (term expires 1952).

Dr. R. G. Gustavson, chancelor, University of Nebraska, Lincoln 8, Nebr. (term expires 1954).

Mr. David M. Heyman, 61 Broadway, New York, N. Y. (term expires 1955).

Mr. Louis Hollander, New York State Council, CIO, 31 West Fifteenth Street, New York, N. Y. (term expires 1953).

Dr. Robert F. Loeb, department of medicine, College of Physicians and Surgeons, Columbia University, 620 West One Hundred and Sixty-eighth Street, New York 32, N. Y. (term expires 1954).

Mrs. Agnes E. Meyer (Eugene), 1624 Crescent Place NW., Washington, D. C. (term expires 1952).

Dr. J. H. Means, medical department, Massachusetts Institute of Technology, Cambridge 39, Mass.

Dr. Lowell J. Reed, vice president, Johns Hopkins University, 601 North Broadway, Baltimore 5, Md. (term expires 1954).

Dean Thorndike Saville, College of Engineering, New York University, University Heights, New York 53, N. Y. (term expires 1952).

Dr. Charles E. Smith, School of Public Health, University of California, Berkeley 4, Calif. (term expires 1955).

Dr. Channing H. Tobias, director, Phelps-Stokes Fund, 101 Park Avenue, New York 17, N. Y. (term expires 1953).

Dr. Wilton L. Halverson, Institute of Inter-American Affairs, room 424, 499 Pennsylvania Avenue, Washington, D. C. (term expires 1953).

Ex officio members

Dr. E. H. Cushing, assistant chief medical director, Research and Education Service, Veterans' Administration, Washington, D. C. (alternate for Vice Adm. Joel T. Boone, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington, D. C.)

Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington, D. C.

Brig. Gen. A. H. Schwichtenberg, USAF (MC), staff assistant to the Director, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington, D. C.

Rear Adm. B. Groesbeck, Jr., USN (MC), Bureau of Medicine and Surgery (alternate for Dr. W. Randolph Lovelace II, Chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington, D. C.

NATIONAL ADVISORY ARTHRITIS AND METABOLIC DISEASES COUNCIL

Dr. Joseph Barach,, University of Pittsburgh, School of Medicine, Falk Clinic, 3601 Fifth Avenue, Pittsburgh 13, Pa. (term expires 1955).

Dr. Lawrence Cutler, 33 Grove Street, Bangor, Maine (term expires 1955).

Dr. Richard H. Freyberg, associate professor clinical medicine,[1] 321 East Forty-second Street, New York 17, N. Y. (term expires 1953).

Mrs. Elinor R. (Edward H.) Heller, 219 Atherton Avenue, Menlo Park, Calif. (term expires 1953).

Dr. Philip S. Hench, Mayo Clinic, Rochester, Minn. (term expires 1952).

Mr. Robert H. Hinckley, vice president, American Broadcasting Co., Inc., 30 Rockfeller Plaza, New York 20, N. Y. (term expires 1955).

Dr. W. Paul Holbrook, 2430 East Sixth Street, Tucson, Ariz. (term expires 1953).

Mr. LeRoy Martin, vice president and trust officer, Wachovia Bank & Trust Co., Raleigh, N. C. (term expires 1952).

Mr. Floyd B. Odlum, president, Atlas Corp., 33 Pine Street, New York 5, N. Y. (term expires 1954).

Dr. Cecil J. Watson, professor of medicine, The Medical School, University of Minnesota, Minneapolis 14, Minn. (term expires 1954).

Mr. Clyde E. Wildman, president, DePauw University, Greencastle, Ind. (term expires 1952).

Dr. Maxwell Wintrobe, Salt Lake General Hospital, 175 East Twenty-first Street South, Salt Lake City 5, Utah (term expires 1954).

Ex officio members

Dr. James J. Smith, Chief, Education Service, Department of Medicine and Surgery, Veterans' Administration, Washington, D. C. (alternate for Vice Adm. Joel T. Boone, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington 25, D. C.).

Col. Paul S. Francher, MC, Chief, Medical Service, Walter Reed Army Hospital, Washington 12, D. C. (alternate for Dr. W. Randolph Lovelace II, chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington 25, D. C.).

Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.

NATIONAL ADVISORY NEUROLOGICAL DISEASES AND BLINDNESS COUNCIL

Mr. M. Robert Barnett, executive director, American Foundation for the Blind, Inc., 15 West Sixteenth Street, New York, N. Y. (term expires 1955).

Mr. W. Kuhn Barnett, supervisor, special education, State board of education, Commonwealth of Virginia, Richmond 16, Va. (term expires 1954).

Mr. Davis E. Geiger, Ashland, Ky. (term expires 1955).

Mr. Leonard Goldenson, president, United Paramount Theatres, 1501 Broadway, New York 18, N. Y. (term expires 1952).

Dr. Dan M. Gordon, 133 East Fifty-eighth Street, New York 22, N. Y. (term expires 1952).

Dr. H. Worley Kendell, head, department of physical medicine and rehabilitation, University of Illinois, 1819 West Polk Street, Chicago 12, Ill. (term expires 1955).

Dr. P. F. Lucchesi, superintendent and medical director, Philadelphia General

[1] Cornell University Medical College.

Hospital, Thirty-fourth Street and Curie Avenue, Philadelphia 4, Pa. (term expires 1952).

Dr. H. Houston Merritt, Neurological Institute, 710 West One Hundred and Sixty-eighth Street, New York 32, N. Y. (term expires 1953).

Dr. Cornelius H. Traeger, medical director, National Multiple Sclerosis Society, 270 Park Avenue, suite 7 G, New York 17, N. Y. (term expires 1954).

Mr. J. M. Ulmer, Ulmer, Berne, Gordon & Glickman, B. F. Keith Building, Euclid Avenue and East Seventeenth Street, Cleveland 15, Ohio (term expires 1953).

Dr. Henry W. Woltman, Mayo Clinic, Rochester, Minn. (term expires 1954).

Dr. D. W. Woolley, Rockefeller Institute, Sixty-sixth Street and York Avenue, New York 21, N. Y. (term expires 1953).

Ex officio members

Dr. Harvey Tompkins,[1] chief, psychiatry and neurology division, Department of Medicine and Surgery, Veterans' Administration, Washington, D. C. (alternate for Vice Adm. Joel T. Boone, chief medical director, Department of Medicine and Surgery, Veterans' Administration, Washington 25, D. C.).

Lt. Col. John W. Kemble, MC, chief, neurology section, Walter Reed Army Hospital, Washington 12, D. C. (alternate for: Dr. W. Randolph Lovelace II, chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington 25, D. C.).

Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.

BIOCHEMISTRY STUDY SECTION

Dr. Wendell H. Griffith (chairman), department of physiological chemistry, School of Medicine, University of California Medical Center, Los Angeles 24, Calif. (term expires 1953).

Dr. H. A. Barker, division of plant biochemistry, University of California College of Agriculture, 3048 Life Sciences Building, Berkeley 4, Calif. (term expires 1955).

Dr. George B. Brown, Sloan-Kettering Institute, 444 East Sixty-eighth Street, New York 21, N. Y. (term expires 1954).

Dr. H. E. Carter, professor of chemistry, University of Illinois department of chemistry, Urbana, Ill. (term expires 1954).

Dr. Vernon H. Cheldelin, Oregon State College, Corvallis, Oreg. (term expires 1955).

Col. Fratis L. Duff (Air Force), Chief, Preventive Medical Division, Directorate of Professional Services, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.

Dr. Joseph S. Fruton, professor of biochemistry, Yale University School of Medicine, 333 Cedar Street, New Haven 11, Conn. (term expires 1955).

Dr. Samuel Gurin, department of physiological chemistry, University of Pennsylvania School of Medicine, Philadelphia 4, Pa. (term expires 1955).

Dr. Hans F. Jensen (Army), Army Medical Research Laboratory, Fort Knox, Ky.

Dr. Oliver J. Irish (Veterans' Administration), room 873, Pathology Division, Department of Medicine and Surgery, Veterans' Administration Building, Washington 25, D. C.

Dr. Arthur Kornberg (Public Health), National Institutes of Health, Bethesda 14, Md.

Dr. James A. Miller, McArdle Memorial Laboratory, University of Wisconsin, Madison 6, Wis. (term expires 1955).

Dr. Severo Ochoa, College of Medicine, New York University, 477 First Avenue, New York 16, N. Y. (term expires 1952).

Dr. Julius Sendroy, Jr. (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.

Dr. Emil L. Smith, School of Medicine, University of Utah, Salt Lake City 2, Utah (term expires 1954).

Dr. Elmer H. Stotz, professor of biochemistry, University of Rochester School of Medicine and Dentistry, 260 Crittenden Boulevard, Rochester 20, N. Y. (term expires 1954).

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[1] Temporary, until successor is named.

Ex officio

Dr. Irvin Fuhr (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

CARDIOVASCULAR STUDY SECTION

Dr. George E. Burch (chairman), department of medicine, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans 13, La. (term expires 1953).
Dr. Allan M. Butler, Massachusetts General Hospital, Fruit Street, Boston 14, Mass. (term expires 1954).
Dr. Albert Dorfman, School of Medicine, University of Chicago, 920 East Fifty-ninth Street, Chicago 37, Ill. (term expires 1955).
Commander Melvin M. Driskell (Navy), United States Naval Hospital, Bethesda 14, Md.
Dr. Hiram Essex, The Mayo Foundation, University of Minnesota, Rochester, Minn. (term expires 1954).
Dr. Keith S. Grimson, professor of surgery, Duke University, Durham, N. C. (term expires 1955).
Dr. John K. Lewis, department of medicine, Stanford University Hospital, San Francisco 15, Calif. (term expires 1953).
Col. Thomas W. Mattingly (Army), Walter Reed Army Hospital, Army Medical Center, Washington 12, D. C.
Col. William D. Preston (Air Force), Chief, Internal Medicine Branch, Office of the Surgeon General, USAF, Washington 25, D. C.
Dr. Warren M. Sperry, New York State Psychiatric Institute, 722 West One Hundred and Sixty-eighth Street, New York 32, N. Y. (term expires 1952).
Dr. W. C. Stadie, department of research medicine, University of Pennsylvania, 820 Maloney Clinic, Thirty-sixth and Spruce Streets, Philadelphia 4, Pa. (term expires 1953).
Dr. Luther L. Terry (Public Health), Chief, Medical Service, Public Health Service, Wyman Park Drive and Thirty-first Street, Baltimore 11, Md.
Dr. James V. Warren, Emory University School of Medicine, 36 Butler Street SE., Atlanta 3, Ga. (term expires 1955).
Dr. Harvey L. White, School of Medicine, Washington University, Kingshighway and Euclid Avenue, St. Louis 10, Mo. (term expires 1955).

Ex officio

Dr. Eleanor M. K. Darby (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

DENTAL STUDY SECTION

Dr. J. L. T. Appleton (chairman), School of Dentistry, University of Pennsylvania, Fortieth and Spruce Streets, Philadelphia 4, Pa. (term expires 1952).
Dr. W. D. Armstrong, Medical School, University of Minnesota, Minneapolis 14, Minn. (term expires 1952).
Dr. Francis A. Arnold, Jr. (Public Health), National Institutes of Health, Bethesda 14, Md.
Col. Joseph Bernier (Army), Armed Forces Institute of Pathology, Seventh and Independence Avenue, Washington 25, D. C.
Dr. Allan G. Brodie, College of Dentistry, University of Illinois, 808 South Wood Street, Chicago 12, Ill. (term expires 1953).
Dr. Seymour J. Kreshover, professor of oral pathology and director, dental research, Medical College of Virginia, School of Dentistry, Richmond, Va. (term expires 1955).
Dr. Kenneth R. Pfeiffer (Veterans' Administration), Chief of Research and Education, Division of Dental Service, Veterans' Administration, Washington 25, D. C.
Prof. Ralph W. Phillips, School of Dentistry, Indiana University, 1121 West Michigan Avenue, Indianapolis 2, Ind. (term expires 1955).
Col. Walter J. Reuter (Air Force), Dental Service, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.
Capt. Carl A. Schlack (Navy), dental facility, Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.

Dr. J. F. Volker, dean, University of Alabama School of Dentistry, University Medical Center, Birmingham 5, Ala. (term expires 1955).
Dr. H. A. Zander, University of Minnesota, Minneapolis 14, Minn. (term expires 1954).

Ex officio

Dr. Edward P. Offutt (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

ENDOCRINOLOGY STUDY SECTION

Dr. Charles Huggins (chairman), department of surgery, University of Chicago, 950 East Fifty-ninth Street, Chicago, Ill. (term expires 1954).
Dr. Louis K. Alpert (Veterans' Administration), Chief, General Medical Services, Veterans' Administration hospital, 2650 Wisconsin Avenue NW., Washington 7, D. C.
Dr. Leslie R. Bennett, professor of physiology, University of California School of Medicine, Berkeley 4, Calif. (term expires 1955).
Maj. Joseph A. Connor, Jr. (Air Force), Acting Chief, Aviation Medical Division, Directorate of Professional Services, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.
Dr. T. F. Gallagher, Sloan-Kettering Institute, 444 East Sixty-eighth Street, New York 21, N. Y. (term expires 1954).
Dr. Arthur Grollman, department of experimental medicine, Southwestern Medical College, 2211 Oaklawn Avenue, Dallas 4, Tex. (term expires 1953).
Dr. Roy Hertz (Public Health), National Cancer Institute, Bethesda 14, Md.
Dr. Warren O. Nelson, professor of anatomy, State University of Iowa, College of Medicine, Iowa City, Iowa (term expires 1955).
Dr. Gregory Pincus, director of laboratories, Worcester Foundation for Applied Research, Shrewsburg, Mass. (term expires 1953).
Lt. Col. H. E. Ratcliffe (Army), Office of the Surgeon General, Department of the Army, Washington 25, D. C.
Dr. Jane A. Russell, department of biochemistry, Emory University School of Medicine, Emory University, Ga. (term expires 1954).
Dr. Samuel Soskin, Michael Reese Hospital, Twenty-ninth Street and Ellis Avenue, Chicago 16, Ill. (term expires 1953).
Dr. George W. Thorn, Peter Bent Brigham Hospital, Boston, Mass. (term expires 1955).
Dr. E. P. Vollmer (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.

Ex officio

Dr. Samuel Hall (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

ENVIRONMENTAL HEALTH STUDY SECTION

Dr. Gordon Fair (chairman), chairman, division of engineering sciences, Harvard University, Cambridge 38, Mass. (term expires 1954).
Dr. F. C. Bishopp (Department of Agriculture), Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington 25, D. C.
Commander Sidney A. Britten (Navy), Bureau of Medicine and Surgery, Potomac Annex No. 3, Department of the Navy, Washington 25, D. C.
Maj. Jack C. Carmichael (Air Force), Chief, Environmental Sanitation Branch, Preventive Medicine Division, Office of the Air Surgeon, Department of the Air Force, Washington 25, D. C.
Dr. Rolf Eliassen, Sedgwick Laboratories of Sanitary Science, Massachusetts Institute of Technology, Cambridge 39, Mass. (term expires 1953).
Dr. Harold B. Gotaas, department of civil engineering, University of California, Berkeley, Calif. (term expires 1953).
Dr. H. O. Halvorson, department of bacteriology, University of Illinois, Urbana, Ill. (term expires 1954).
Mr. W. C. L. Hemeon, Industrial Hygiene Foundation of America, Inc., 4400 Fifth Avenue, Pittsburgh 13, Pa. (term expires 1952).
Col. Charles H. Moseley (Army), Environmental Sanitation Branch, Office of the Surgeon General, Department of the Army, Washington 25, D. C.

Mr. Vernon MacKenzie (public health), Environmental Health Center, 1006 Broadway, Cincinnati 2, Ohio.
Dr. W. L. Mallmann, professor of bacteriology and public health, Michigan State College, Lansing, Mich. (term expires 1955).
Prof. Theodore A. Olson, School of Public Health, University of Minnesota, Minneapolis 14, Minn. (term expires 1955).
Dr. Frank Princi, Kettering Laboratory of Applied Physiology, University of Cincinnati, College of Medicine, Cincinnati 19, Ohio (term expires 1954).
Dr. Charles E. Renn, professor of sanitary engineering, Johns Hopkns University, School of Engineering, Baltimore 18, Md. (term expires 1955).

Ex officio

Mr. Irving Gerring (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

EXPERIMENTAL THERAPEUTICS STUDY SECTION

Dr. Walsh McDermott (chairman), New York Hospital, Cornell University Medical College, 1300 York Avenue, New York 21, N. Y. (term expires 1952).
Dr. Paul Beeson, Grady Memorial Hospital, Atlanta 3, Ga. (term expires 1954).
Dr. Robert W. Berliner (Public Health), National Heart Institute, Bethesda 14, Md.
Dr. Kenneth N. Campbell, department of chemistry, University of Notre Dame, Notre Dame, Ind. (term expires 1952).
Dr. Alfred Gellhorn, College of Physicians and Surgeons, 620 West One hundred and sixty-eighth Street, New York 32, N. Y. (term expires 1955).
Dr. Harry H. Gordon, chief, pediatric service, Mount Sinai Hospital of Baltimore, Monument and Rutland Streets, Baltimore 5, Md.
Capt. John A. C. Gray (Navy), Bureau of Medicine and Surgery, Potomac Annex, Building No. 3, Department of the Navy, Washington 25, D. C.
Dr. Byron E. Hall, Mayo Clinic, Rochester, Minn. (term expires 1954).
Col. F. J. Knoblauch (Army), Office of the Surgeon General, Department of the Army, Washington 25, D. C.
Dr. Malcolm H. Merrill, 2180 Milvia Street, Berkeley 4, Calif. (term expires 1953).
Dr. Frederick J. Moore, Los Angeles County Hospital, 1200 North State Street, Los Angeles, Calif. (term expires 1952).
Dr. Donald M. Pillsbury, department of dermatology, University of Pennsylvania, 3400 Spruce Street, Philadelphia 4, Pa. (term expires 1952).
Dr. Howard E. Skipper, assistant director, Southern Research Institute, 917 South Twentieth Street, Birmingham 5, Ala. (term expires 1955).
Lt. Col. P. K. Smith (Air Force), Aeromedical and Human Resources Division, Directorate of Research and Development, Headquarters, United States Air Force, Washington 25, D. C.
Dr. C. Chester Stock, Division of Experimental Chemotherapy, The Sloan-Kettering Institute, 444 East Sixty-eighth Street, New York 21, N. Y. (term expires 1953).
Dr. Arthur M. Walker (Veterans' Administration), Department of Medicine and Surgery, Veterans' Administration Bldg., Washington 25, D. C.
Dr. Julius L. Wilson, Ochsner Clinic, Prytania and Aline Streets, New Orleans 15, La. (term expires 1955).
Dr. W. Barry Wood, Jr., department of internal medicine, Barnes Hospital, 600 S. Kingshighway, St. Louis 10, Mo. (term expires 1954).

Ex officio

Dr. Frederick W. Appel (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

HEMATOLOGY STUDY SECTION

Dr. Carl V. Moore (chemistry), professor of medicine, Barnes Hospital, 600 South Kingshighway, St. Louis 10, Mo. (term expires 1955).
Dr. K. M. Brinkhous, department of pathology, University of North Carolina School of Medicine, Chapel Hill, N. C. (term expires 1952).
Dr. Alfred Chanutin, biochemical laboratory, University of Virginia, University Station, Charlottesville, Va. (term expires 1955).

Lt. Comdr. E. P. Cronkite (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. Louis K. Diamond, The Children's Hospital, 300 Longwood Avenue, Boston 15, Mass (term expires 1953).
Dr. George H. L. Dillard (public health), National Institutes of Health, Bethesda 14, Md.
Col. Hugh R. Gilmore (Army), Pathology and Allied Sciences Division, Office of The Surgeon General, Department of the Army, Washington 25, D. C.
Dr. Thomas Hale Ham, professor of medicine, school of medicine, Western Reserve University, 2109 Adelbert Road, Cleveland 6, Ohio (term expires 1955).
Dr. Leon O. Jacobson, division of biological sciences, University of Chicago, Chicago 37, Ill. (term expires 1954).
Col. Alfred H. Lawton (Air Force), Office of the Surgeon General, United States Air Force, Washington 25, D. C.
Brig. Gen. Albert H. Schwichtenberg, Department of Defense, Office of Medical Services, Washington 25, D. C.
Capt. Raymond W. Murray (alternate, Department of Defense), Department of Defense, Office of Medical Services, Washington 25, D. C.
Dr. Max M. Strumia, Laboratory of Clinical Pathology, The Bryn Mawr Hospital, Bryn Mawr, Pa. (term expires 1955).

Ex officio

Dr. Byron C. Brunstetter (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

METABOLISM AND NUTRITION STUDY SECTION

Dr. William J. Darby (chairman), Vanderbilt University, School of Medicine, Nashville 5, Tenn., (term expires 1953).
Dr. Louis K. Alpert (Veterans' Administration), Chief, General Medical Services, Veterans' Administration Hospital, 2650 Wisconsin Avenue, Washington 7, D. C.
Dr. C. A. Baumann, department of biochemistry, University of Wisconsin, College of Agriculture, Madison 6, Wis., (term expires 1955).
Dr. Edward W. Boland, Building 4, Medical Square, 2210 West Third Street, Los Angeles 5, Calif., (term expires 1953).
Dr. Charles S. Davidson (public health), Thorndike Memorial Laboratory, Boston City Hospital, Boston 18, Mass.
Dr. Theodore F. Friedemann (Army), Medical Nutrition Laboratory, 1849 West Pershing Road, Chicago 9, Ill.
Dr. Robert L. Jackson, department of pediatrics, State University of Iowa, University Hospitals, Iowa City, Iowa, (term expires 1954).
Dr. Norman Jolliffe, Director, Bureau of Nutrition, Department of Health, 125 Worth Street, New York 13, N. Y., (Term expires 1954).
Dr. E. Henry Keutmann, University of Rochester, School of Medicine and Dentistry, 260 Crittenden Boulevard, Rochester 20, N. Y., (term expires 1954).
Dr. Alfred H. Lawton (Air Force), Aeromedical and Human Resources Division, Directorate of Research and Development, Headquarters, United States Air Force, Washington 25, D. C.
Dr. John P. Peters, professor of medicine, Yale University School of Medicine, New Haven 11, Conn., (term expires 1953).
Dr. Charles Ragan, Columbia University College of Physicians and Surgeons, 620 West One hundred and sixty-eighth Street, New York 32, N. Y., (term expires 1955).
Dr. Edward C. Reifenstein, Jr., Director, Oklahoma Medical Research Institute and Hospital, 825 Northeast Thirteenth Street, Oklahoma City, Okla., (term expires 1954).
Dr. Marian W. Ropes, Massachusetts General Hospital, Boston, Mass., (term expires 1953).
Dr. Frederick J. Stare, Harvard University, Boston 15, Mass., (term expires 1955).
Dr. DeWitt Stetton, Chief, Division of Nutrition and Psysiology, The Public Health Research Institute of the City of New York, Inc., foot of East Fifteenth Street, New York 9, N. Y., (term expires 1955).

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Ex officio

Dr. Elsa Orent Keiles (excutive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

MICROBIOLOGY AND IMMUNOLOGY STUDY SECTION

Dr. Thomas B. Turner (chairman), department of bacteriology, Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore 5, Md., (term expires 1954).
Comdr. LaVerne A. Barnes (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. Norman F. Conant, department of bacteriology, Duke University School of Medicine, Durham, N. C., (term expires 1952).
Dr. F. Duran-Reynals, department of bacteriology, Yale University School of Medicine, 310 Cedar Street, New Haven 11, Conn. (term expires 1954).
Dr. R. E. Dyer, director of research, Robert Winship Memorial Clinic, Emory University, Emory University, Ga. (term expires 1955).
Dr. Charles A. Evans, department of microbiology, University of Washington, Seattle 5, Wash. (term expires 1955).
Dr. I. C. Gunsalus, professor of bacteriology, University of Illinois, 362 Noyes Laboratory of Chemistry, Urbana, Ill. (term expires 1955).
Maj. Gerrit L. Hekhuis (Air Force), Department of the Air Force, Headquarters, United States Air Force, Washington 25, D. C.
Dr. Sanford B. Hooker, Boston University School of Medicine, 80 East Concord Street, Boston 18, Mass. (term expires 1953).
Dr. C. L. Larson (public health), director, Rocky Mountain Laboratory, Public Health Service, Hamilton, Mont.
Dr. Leland Parr (Veterans' Administration), department of bacteriology, George Washington University, 1335 H. Street NW., Washington, D. C.
Dr. Morris F. Shaffer, department of bacteriology, School of Medicine, Tulane University of Louisiana, New Orleans 18, La. (term expires 1953).
Prof. James M. Sherman, Stocking Hall, Cornell University, Ithaca, N. Y. (term expires 1955).
Dr. Joel Warren (Army), AMSGS, Army Medical Center, Washington 12, D. C.

Ex officio

Dr. Edward P. Offutt (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

MORPHOLOGY AND GENETICS STUDY SECTION

Dr. J. Walter Wilson (chairman), department of biology, Brown University, Providence 12, R. I. (term expires 1954).
Dr. E. G. Butler, department of biology, Princeton University, Princeton, N. J. (term expires 1955).
Dr. D. Eugene Copeland (Air Force), Aviation Medicine Division, Directorate of Professional Services, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.
Dr. Edward W. Dempsey, department of anatomy, Washington University, St. Louis 10, Mo. (term expires 1955).
Dr. Louis B. Flexner, chairman, department of anatomy, University of Pennsylvania School of Medicine, Philadelphia 4, Pa. (term expires 1955).
Dr. David R. Goddard, University of Pennsylvania, botanical laboratory, Thirty-eighth Street and Woodland Avenue, Philadelphia, Pa. (term expires 1954).
Dr. W. E. Heston (Public Health), National Cancer Institute, Bethesda 14, Md.
Dr. Arthur Kirschbaum, professor of anatomy and head of department, University of Illinois School of Medicine, 1853 West Polk Street, Chicago 12, Ill. (term expires 1955).
Dr. A. L. Lehninger, associate professor of biochemistry, University of Chicago, 950 East Fifty-ninth Street, Chicago, Ill. (term expires 1954.
Lt. Garner L. Lewis (Navy) Department of the Navy, Bureau of Medicine and Surgery, Building 3, Washington 25, D. C.
Dr. Clarence P. Oliver, department of zoology, University of Texas, Austin 12, Tex. (term expires 1952).
Dr. Francis O. Schmitt, department of biology, Massachusetts Institute of Technology, Cambridge 39, Mass. (term expires 1952).

Dr. Robert E. Stowell, department of oncology, University of Kansas Medical Center, Kansas City 3, Kans. (term expires 1953).
Dr. E. L. Tatum, School of Biological Sciences, Stanford University, Stanford, Calif. (term expires 1953).
Lt. Col. Carl F. Tessmer (Army) commanding officer, Army Medical Research Laboratory, Fort Knox, Ky.

Ex officio

Mr. Francis L. Schmehl (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

PATHOLOGY STUDY SECTION

Dr. Alan Moritz (chairman), Western Reserve University, Institute of Pathology, 2085 Adelbert Road, Cleveland 6, Ohio, (term expires 1954).
Dr. D. Murray Angevine, professor of pathology, University of Wisconsin, Madison 6, Wis. (term expires 1952).
Dr. J. E. Ash (veterans' Administration), 915 Nineteenth Street NW, Washington, D. C.
Dr. Granville A. Bennette, University of Illinois, College of Medicine, 1853 West Polk Street, Chicago 12, Ill. (term expires 1952).
Brig. Gen. Elbert DeCoursey (Army), Armed Forces Institute of Pathology, Seventh and Independence Avenue, Washington, D. C.
Dr. Sidney Farber, professor of pathology, Harvard Medical School, Children's Hospital, 300 Longwood Avenue, Boston 15, Mass. (term expires 1954).
Dr. Jacob Furth, Division of Biology, Oak Ridge National Laboratory, P. O. Box P, Oak Ridge, Tenn. (term expires 1954).
Dr. Frank W. Hartman, Henry Ford Hospital, Detroit 2, Mich. (term expires 1953).
Dr. Russell L. Holman, department of pathology, Louisiana State University School of Medicine, New Orleans 12, La. (term expires 1953).
Dr. Paul Klemperer, Mount Sinai Hospital, New York 29, N. Y. (term expires 1955).
Dr. R. D. Lillie (Public Health), National Institutes of Health, Bethesda 14, Md.
Dr. S. C. Madden, department of pathology, University of California School of Medicine, Los Angeles 24, Calif. (term expires 1952).
Dr. Douglas H. Sprunt, Institute of Pathology, University of Tennessee, Memphis 3, Tenn. (term expires 1953).
Col. Ralph M. Thompson (Air Force), Armed Forces Institute of Pathology, Seventh and Independence Avenue SW., Washington, D. C.
Comdr. R. B. Williams, Jr. (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. H. M. Zimmerman chief, laboratory division, Montefiore Hospital, Gun Hill Road, near Jerome Avenue, New York 67, N. Y. (term expires 1955).

Ex officio

Dr. Byron C. Brunstetter (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

PHARMACOLOGY STUDY SECTION

Dr. Carl A. Dragstedt (chairman), Northwestern University Medical School, 303 East Chicago Avenue, Chicago 11, Ill., (term expires 1953).
Dr. K. K. Chen, Lilly Research Laboratories, Indianapolis 6, Ind. (term expires 1955).
Dr. E. P. Ellinger (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. Alfred Gilman, College of Physicians and Surgeons, Columbia University, 630 West One Hundred and Sixty-eighth Street, New York 32, N. Y. (term expires 1955).
Dr. L. S. Goodman, department of pharmacology, University of Utah School of Medicine, Salt Lake City 1, Utah (term expires 1952).
Dr. Harvey B. Haag, Medical College of Virginia, Richmond 19, Va. (term expires 1953).
Dr. John C. Krantz, Jr., department of pharmacology, University of Maryland, 29 South Greene Street, Baltimore 1, Md. (term expires 1954).

Dr. Otto Krayer, department of pharmacology, Harvard Medical School, 25 Shattuck Street, Boston 15, Mass. (term expires 1954).
Lt. Col. Paul C. Larnce (Air Force), Headquarters, United States Air Force, AFCSG–20, Washington 25, D. C.
Dr. Oliver H. Lowry, department of pharmacology, Washington University School of Medicine, Euclid Avenue and Kingshighway, St. Louis 10, Mo. (term expires 1952).
Dr. Carl Curt Pfeiffer, College of Medicine, University of Illinois, 1853 West Polk Street, Chicago 12, Ill. (term expires 1953).
Dr. Sanford M. Rosenthal (Public Health), National Institutes of Health, Bethesda 14, Md.
Dr. Arnold D. Welch, professor of pharmacology and director of department, Western Reserve University, Cleveland 6, Ohio (term expires 1955).
Lt. Col. James A. Wier (Army), Assistant Chief, Medical Consultants Division, Department of the Army, Office of the Surgeon General, Washington 25, D. C.

Ex officio

Dr. Elsa Orent Keiles (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

PHYSIOLOGY STUDY SECTION

Dr. H. W. Magoun (chairman), professor of anatomy, the medical school, University of California, Los Angeles 24, Calif. (term expires 1954).
Dr. John M. Brookhart, associate professor of physiology, University of Oregon Medical School, Portland, Oreg. (term expires 1955).
Dr. Donald E. Copeland (Air Force), Aviation Medicine Division, Office of the Surgeon General, Department of the Air Force, Headquarters, United States Air Force, Washington 25, D. C.
Dr. Ray G. Daggs (Army), director of research, medical department field research laboratory, Fort Knox, Ky.
Dr. John S. Gray, chairman, department of physiology, the medical school, Northwestern University, 303 East Chicago Avenue, Chicago 11, Ill. (term expires 1955).
Dr. Hardin B. Jones, division of medical physics, University of California, Berkeley 4, Calif. (term expires 1955).
Dr. Howard B. Lewis, chairman, department of biological chemistry, medical school, University of Michigan, Ann Arbor, Mich. (term expires 1953).
Dr. Frank C. Mann, the Mayo Foundation, Rochester, Minn. (term expires 1952).
Lt. Comdr. David Minard (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. Robert F. Pitts, department of physiology, Cornell University Medical College, 1300 York Avenue, New York, N. Y. (term expires 1955).
Dr. J. P. Quigley, department of physiology, University of Tennessee, Memphis 3, Tenn. (term expires 1953).
Dr. Nathan W. Shock (public health), chief, gerontology section, National Institutes of Health, Baltimore City Hospitals, Baltimore 24, Md.
Dr. J. J. Smith (Veterans' Administration), Chief, Education Division, Research and Education Service, Veterans' Administration Building, Vermont Avenue and H Street NW., Washington 25, D. C.
Dr. Harry C. Solomon, 74 Fenwood Road, Boston 15, Mass. (term expires 1954).

Ex officio

Dr. Charles P. Huttrer (executive secretary), division of research grants, National Institutes of Health, Bethesda 14, Md.

PUBLIC HEALTH STUDY SECTION

Dr. Carl Buck (chairman), School of Public Health, University of Michigan, Ann Arbor, Mich. (term expires 1953).
Capt. R. W. Babione (Navy), Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C.
Dr. Philip E. Blackerby, Jr., director, division of dentistry, W. K. Kellogg Foundation, Battle Creek, Mich. (term expires 1952).
Dr. Antonio Ciocco, department of biostatistics, University of Pittsburgh Graduate School of Public Health, Pittsburgh 13, Pa. (term expires 1953).
Dr. Dean A. Clark, general director, Massachusetts General Hospital, Fruit Street, Boston 14, Mass. (term expires 1954).

Col. Fratis L. Duff (Air Force), Division of Professional Service, Preventive Medicine Division, Department of the Air Force, Washington 25, D. C.
Dr. C. Howe Eller, professor of preventive medicine, School of Medicine, University of Louisville, 240 East Madison Street, Louisville 2, Ky. (term expires 1955).
Dr. Bascom Johnson (Veterans' Administration), Chief, Professional Services, Veterans' Administration Hospital, Fort Logan, Colo.
Dr. Hugo Muench, professor of biostatistics, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Mass. (term expires 1954).
Dr. Helen Nahm, National Nursing Accrediting Association, 2 Park Avenue, New York, N. Y. (term expires 1955).
Mr. George St. J. Perrott (public health), Public Health Service, Washington 25, D. C.
Dr. Edward S. Rogers, dean, School of Public Health, University of California, Berkeley 4, Calif. (term expires 1954).
Dr. Rupert B. Vance, Kenan research professor, University of North Carolina, Chapel Hill, N. C. (term expires 1954).

Ex officio

Dr. Frederick W. Appel (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

SENSORY DISEASES STUDY SECTION

Dr. Jonas S. Friedenwald (chairman), associate professof of ophthalmology, Johns Hopkins University, 1212 Eutaw Place, Baltimore 17, Md. (term expires 1954).
Dr. Norton Canfield, associate clinical professor of otolaryn, Yale University School of Medicine, 175 St. Ronan Street, New Haven, Conn. (term expires 1956).
Dr. Hallowell Davis, Central Institutes for the Deaf, 818 South Kingshighway, St. Louis 10, Mo. (term expires 1954).
Col. John H. King, Jr. (Army), Chief, Eye Clinic, Walter Reed Army Hospital, Washington 12, D. C.
Dr. V. Everett Kinsey, Kresge Eye Institute, 690 Mullett Street, Detroit 26, Mich. (term expires 1953).
Dr. Peter Kronfeld, University of Illinois, School of Medicine, 904 West Adams Street, Chicago 7, Ill. (term expires 1953).
Brig. Gen. Earl Maxwell (Air Force), Director of Professional Services, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.
Dr. T. C. Ruch, department of physiology and biophysics, University of Washington, Seattle 5, Wash. (term expires 1956).
Dr. George K. Smelser, associate professor research in ophthalmology, College of Physicians and Surgeons, 630 West One hundred and sixty-eighth Street, New York 32, N. Y. (term expires 1954).
Dr. Kenneth C. Swan, professor of ophthalmology, University of Oregon Medical School, 3181 Southwest Marquam Hill Road, Portland 1, Oreg. (term expires 1953).
Dr. Phillips Thygeson, clinical professor of ophthalmology, University of California Medical School, the Medical Center, San Francisco 22, Calif. (term expires 1955).
Dr. Derrick Vail (Veterans' Administration) department of ophthalmology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. (term expires 1955).

Ex officio

Dr. Charles P. Huttrer (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

SURGERY STUDY SECTION

Dr. Owen H. Wangensteen (chairman), chief, department of surgery, University of Minnesota, The Medical School, Minneapolis 14, Minn. (term expires 1954).
Dr. Claude S. Beck, Lakeside Hospital, 2065 Adelbert Road, Cleveland 6, Ohio (term expires 1954).
Col. Warner F. Bowers (Army), Office of the Surgeon General, Department of the Army, Washington 25, D. C.

Dr. Loren R. Chandler, Stanford University, School of Medicine, 2398 Sacramento Avenue, San Francisco 15, Calif. (Term expires 1952).
Dr. Lester R. Dragstedt, department of surgery, University of Chicago, 950 East Fifty-ninth Street, Chicago 37, Ill. (term expires 1953).
Dr. Robert D. Dripps, professor of anesthesiology, University of Pennsylvania, Philadelphia 4, Pa. (term expires 1955).
Dr. Daniel C. Elkin, department of surgery, Emory University Hospital, Emory University, Ga. (term expires 1953).
Dr. John H. Gibbon, Jr., professor of surgery and director surgical research, Jefferson Medical College of Philadelphia, 1025 Walnut Street, Philadelphia, Pa. (term expires 1955).
Dr. Henry N. Harkins, School of Medicine, University of Washington, Seattle 5, Wash. (term expires 1955).
Dr. Peter Heinbecker, School of Medicine, Washington University, St. Louis 10, Mo. (term expires 1955).
Dr. G. Halsey Hunt (public health), Public Health Service, Washington 25, D. C.
Dr. J. Gordon Lee (Veterans' Administration), Chief, Surgical Service, Veterans' Administration Hospital, 2650 Wisconsin Avenue, Washington 7, D. C.
Dr. Carl A. Moyer, head, department of surgery, Washington University School of Medicine, 600 South Kings Highway, St. Louis 10, Mo. (term expires 1952).
Dr. John H. Mulholland, professor of surgery, New York University, Bellevue Medical Center, 477 First Avenue, New York 16, N. Y. (term expires 1955).
Col. Oscar P. Reeder (Air Force), Department of the Air Force, Headquarters, United States Air Force, Washington 25, D. C.
Dr. Harris B. Shumacker, Jr., Indiana University Medical Center, 1040–1232 West Michigan Street, Indianapolis 7, Ind. (term expires 1954).

Ex Officio

Dr. J. Marshall Ellis (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

TROPICAL MEDICINE STUDY SECTION

Dr. William Frye (chairman), dean, School of Medicine, Louisiana State University, New Orleans 13, La. (term expires 1955).
Dr. George H. Boyd, Graduate School, The University of Georgia, Athens, Ga. (term expires 1953).
Dr. Asa C. Chandler, department of biology, Rice Institute, Houston, Tex. (term expires 1953).
Col. Wesley C. Cox (Army), director, Army Industrial Hygiene Laboratory, Edgewood Arsenal, Md.
Col. Fratis L. Duff (Air Force), Chief, Preventive Medicine Division, Directorate of Professional Services, Office of the Surgeon General, Headquarters, United States Air Force, Washington 25, D. C.
Mr. John M. Henderson, professor of sanitary science, Columbia University School of Public Health and Faculty of Medicine, 600 West One Hundred Sixty-eighth Street, New York 32, N. Y. (term expires 1953).
Dr. Clay G. Huff (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. Herbert G. Johnstone, associate professor of medicine, University of California Medical School, San Francisco, Calif. (term expires 1952).
Dr. P. Morales Otero, 703 Fernandez Juncos Avenue, Santurce, P. R. (term expires 1953).
Dr. Harry Most, New York University, College of Medicine, 477 First Avenue, New York 16, N. Y. (term expires 1954).
Dr. Lloyd E. Rozeboom, department of parsitology, Johns Hopkins University, School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore 5, Md. (term expires 1952).
Dr. Albert B. Sabin, The Children's Hospital Research Foundation, Cincinnati 29, Ohio (term expires 1954).
Dr. L. H. Schmidt, Institute of Medical Research, The Christ Hospital, Mount Auburn, Cincinnati 19, Ohio (term expires 1952).
Brig. Gen. James S. Simmons, United States Army, retired (Veterans' Administration), dean, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Mass.
Dr. Willard H. Wright (Public Health), National Institutes of Health, Bethesda 14, Md.

Ex Officio

Mr. Irving Gerring (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

VIRUS AND RICKETTSIAL STUDY SECTION

Dr. Edwin H. Lennette (chairman), viral and rickettsial disease laboratory, California State Department of Public Health, 1392 University Avenue, Berkeley 2, Calif. (term expires 1955).
Dr. Herald R. Cox, Lederle Laboratories, Pearl River, N. Y. (term expires 1955).
Dr. John H. Dingle, department of preventive medicine, School of Medicine, Western Reserve University, Cleveland 6, Ohio (term expires 1953).
Dr. Thomas Francis, Jr., department of epidemiology, School of Public Health, University of Michigan, Ann Arbor, Mich. (term expires 1952).
Dr. William F. Friedewald, 410 Medical Arts Building, Peachtree Street, Atlanta, Ga. (term expires 1953).
Dr. Karl Habel (public health), National Institutes of Health, Bethesda 14, Md.
Dr. Werner Henle, The Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46, Pa. (term expires 1955).
Dr. Frank L. Horsfall, Jr., Rockefeller Institute of Medical Research, Sixty-sixth Street and York Avenue, New York 21, N. Y. (term expires 1952).
Commander James R. Kingston (Navy), Naval Medical Research Institute, National Naval Medical Center, Bethesda 14, Md.
Dr. K. F. Meyer, director, George Williams Hooper Foundation, University of California Medical Center, San Francisco 22, Calif. (term expires 1955).
Dr. Leland Parr (Veterans' Administration), department of bacteriology, George Washington University, Washington, D. C.
Dr. Richard E. Shope, Merck Institute, Rahway, N. J. (term expires 1954).
Dr. Joseph E. Smadel (Army), department of virus and rickettsial disease, Army Medical School, Washington 12, D. C.
Lt. Paul K. Smith (Air Force), Office of the Surgeon General, Department of the Air Force, Headquarters, United States Air Force, Washington 25, D. C.
Dr. Jerome T. Syverton, department of bacteriology, University of Minnesota, Minneapolis 14, Minn. (term expires 1954).

Ex officio

Dr. Edward P. Offutt (executive secretary), Division of Research Grants, National Institutes of Health, Bethesda 14, Md.

MENTAL HEALTH RESEARCH STUDY SECTION

Dr. Edwin F. Gildea (chairman), head, department of neuropsychiatry, Washington University Medical School, St. Louis, Mo. (term expires 1953).
Dr. Robert B. Aird, professor of neurology, University of California Medical Center, San Francisco, Calif. (term expires 1954).
Lt. Col. Carlos C. Alden, Jr. (Air Force), Department of the Air Force, Headquarters, United States Air Force, Washington, D. C.
Dr. Sinclair H. Armstrong, chairman, Rush department of medicine, the Presbyterian Hospital, 1753 West Congress Street, Chicago, Ill. (term expires 1954).
Dr. John Benjamin, director of research, Child Research Council, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colo. (term expires 1954).
Dr. Leonard S. Cottrell, social psychologist, Russell Sage Foundation, 505 Park Avenue, New York, N. Y. (term expires 1954).
Dr. George L. Engel, associate professor of psychiatry and medicine, University of Rochester School of Medicine, 260 Crittenden Boulevard, Rochester, N. Y. (term expires 1952).
Dr. Jacob E. Finesinger, head, department of psychiatry, University of Maryland Medical School, Baltimore, Md. (term expires 1953).
Dr. Francis Foster, professor of neurology, Georgetown University School of Medicine, Washington, D. C. (term expires 1954).
Dr. Jerome D. Frank, associate professor of psychiatry, the Johns Hopkins Hospital, Phipps Psychiatric Clinic, Baltimore, Md. (term expires 1954).
Dr. Robert E. Harris, associate professor of medical psychology, the Medical Center, University of California, San Francisco, Calif. (term expires 1953).

Dr. A. B. Hollingshead, associate professor of sociology, Yale University, New Haven, Conn. (term expires 1953).
Dr. George A. Jervis, director of Clinical Laboratories, Letchworth Village, Thiells, N. Y. (term expires 1953).
Dr. Erich Lindemann, director of psychiatric clinic, Massachusetts General Hospital, Fruit Street, Boston, Mass (term expires 1952).
Dr. Donald B. Lindsley, professor of psychology, department of psychology, University of California, Los Angeles, Calif. (term expires 1954).
Dr. Ronald Lippitt, program director, Research Center for Group Dynamics, University of Michigan, Ann Arbor, Mich. (term expires 1952).
Dr. Wilmot Shipp Littlejohn, professor, clinical neurology, Medical College of Alabama, 2300 Highland Avenue, Birmingham, Ala. (term expires 1952).
Capt. George N. Raines (Navy), Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C.
Dr. Robert R. Sears, director, laboratory of human development, Palfrey House, Harvard University, Cambridge 38, Mass. (term expires 1953).
Dr. A. Earl Walker, professor of neurological surgery, Johns Hopkins University School of Medicine, 601 North Broadway, Baltimore 5, Md. (term expires 1952).
Dr. Clinton N. Woolsey, professor of neurophysiology, University of Wisconsin Medical School, Madison 6, Wis. (term expires 1954).
Dr. Paul Yakovlev, clinical assistant professor, Harvard Medical School, Building E 2, room 386, 25 Shattuck Street, Boston 15, Mass. (term expires 1954).

Ex officio

Dr. John C. Eberhart (executive secretary), Research Project Director, National Institute of Mental Health, Bethesda 14, Md.

FUNDS REQUESTED TO ENABLE OPENING NEW CLINICAL CENTER

Dr. SEBRELL. Then, Mr. Chairman, the increase we are asking for, as I stated earlier, this year is in order to enable us to open the clinical center in this fiscal year and I think all of the committee is familiar with the clinical center and its purposes.

Mr. FOGARTY. I think you had better remind us—how much was authorized and what we have appropriated and give us in some detail when you expect to begin operations, the number of patients you will take, personnel you will require, etc.

Dr. TOPPING. We expect to take our first patients in the first 2 weeks of April 1953.

STEPS TAKEN SINCE 1948 TO CONSTRUCT CLINICAL RESEARCH FACILITY IN BETHESDA

Mr. FOGARTY. In order to make this record clear, will you tell us when this was authorized, how much was appropriated, the date of completion, and right down the line so we will have a complete story?

Dr. SEBRELL. The Associate Director of the Institute, Dr. Topping, is intimately familiar with all those details.

Dr. TOPPING. In 1948, Dr. Dyer and Dr. Parran, the Surgeon General, came to the committee and pointed out the great need for clinical research facilities; that we were handicapped in our research facilities because of the lack of clinical material; and pointed out to them that Bethesda was growing very, very fast and that it might be advisable to purchase for the future several parcels of land in which no homes and subdivisions had been planned so in the future the National Institutes of Health would not be in the position of the Bureau of Standards where they can have no more land.

The Congress saw the wisdom of their recommendations and granted an appropriation of $3,500,000 in 1948 for the purchase of these parcels of land and for the drawing of plans and specifications for a clinical research facility at Bethseda.

The following year, in 1949, an appropriation was made for the beginning of the actual construction of the clinical center. At that time we discussed with the committee, both in the House and in the Senate, the advisability of planning this whole facility in three stages so that the appropriations could be made each year and contract authority and appropriations provided for, so it would not be necessary to have it all in one appropriation.

I should like the members to have a copy of this statement which sets out the three stages of construction, the appropriations and contract authorities, and the equipment and supplies to be provided in the 1951–52 appropriations.

Mr. FOGARTY. Yes. We will insert that in the record at this point.

(Statement referred to follows:)

The expansion of research facilities for the National Institutes of Health, analysis of cash, contract authority, obligation authority, and cost of limitations, by fiscal years and construction stage

Plans and site (all stages):	
1948—Cash appropriation	$3,500,000
Estimated cash or reserves required through 1953	3,500,000
Stage I construction ($40,000,000 cost limitation):	
1949—Cash appropriation	5,000,000
1949—Contract authority	25,630,000
1950—Contract authority	8,200,000
1952—Cash request	400,000
Total available for obligation	39,230,000
Previous cash available and 1953 request	39,230,000
Expenditures according to present construction schedule	39,230,000
Stage II construction ($8,600,000 cost limitation):	
1950—Cash appropriation	3,900,000
1950—Contract authority	4,700,000
Total available for obligation	8,600,000
Previous cash available	7,800,000
Expenditures according to present construction schedule	8,600,000
Stage II construction ($1,375,000 cost limitation):	
1951—Cash	1,025,000
1951—Contract authority	350,000
1952—Cash (liquidating cash for 1951 contract authority)	350,000
Total available for obligation	1,375,000
Previous cash available	1,375,000
Expenditures according to present construction schedule	1,375,000
Equipment and supplies:	
1951–52—cash appropriations for equipment	7,200,000
1952—Cash appropriation (initial inventory of supplies; and laboratory apparatus)	2,435,540
Total available for obligation	9,635,540
Previous cash available	9,635,540
Expenditures according to present schedule	9,635,540

COST OF CONSTRUCTION

Mr. FOGARTY. What is the total cost of construction, equipment, and supplies?

Dr. TOPPING. The total—I do not have that right here. I will supply it for the record if I may.

Mr. STEPHENS. I have a figure I am pretty sure is correct. The amount is $58,040,000, not including the original $3,500,000 for land and planning nor the use of the escalator clause.

Mr. FOGARTY. It is costing us about $60,000,000 in round figures.

Mr. STEPHENS. That is right, sir.

EVALUATION OF MEDICAL RESEARCH CENTER

Mr. FOGARTY. Is there anything like that in the world?

Dr. SEBRELL. I think we can say this is going to make Bethesda the world's grestest medical research installation. There have been things done along this general idea before but not on the same scale. The only thing I know of that could even be said to look similar to this is the Rockefeller Institute for Medical Research, in New York.

The great thing being done here that was never possible before because research had not developed to its present stage, is to bring together advanced basic research in physics, chemistry, and biology and all the other basic sciences—to bring them together with the clinical research man who is working on the diseased human body. And here we have for the first time the physical facilities to bring together in one location this very fine basic scientific organization that we have at Bethesda with men who are great specialists in fundamental fields of biological and medical research—to bring these men together with a new group of clinical research men to look at a patient again as a human being with all the resources of physics and chemistry which the working clinician does not have at his elbow.

SELECTION OF PATIENTS FOR ADMISSION

Mr. FOGARTY. How will the patients be selected?

Dr. SEBRELL. We hope to select the patients on the basis of their having the particular condition that the clinician has under study in this center. To cite a hypothetical example, suppose our scientific group at Bethesda has a particular interest in some special form of cancer of the breast or cancer of the stomach. Patients would be admitted because they had cancer of the breast or stomach. The clinical staff would apply not only the most advanced treatment for that condition but also carry on the research investigation necessary to get us new knowledge about treating this condition.

For example, take Dr. Scheele's testimony about Dr. Huggins' work on the removal of the adrenals in prostatic cancer. That lead needs following. While he can do a fine job at his place we could be doing some other things which would supplement his work and get the answer more quickly. We need to know why these adrenals have a beneficial effect on certain forms of cancer, as Dr. Huggins is finding. It may be possible to get the same effect without removing the adrenals.

So the ticket of admission for a patient would be a diagnosed disease meeting specific conditions for research study.

Mr. FOGARTY. You do not think you will have any trouble getting applications?

Dr. SEBRELL. I don't expect any trouble in that regard. We expect to work very closely with medical schools, hospital institutions, and physicians, particularly those in nearby areas such as Baltimore, Richmond, and Washington. We expect to select patients from among those referred by their physicians because we can offer them something in the newest forms of treatment and then refer the patients back to their physicians. People now write us as individuals that they have cancer and their doctor has told them their condition is hopeless so won't we take them over.

Mr. DENTON. In desperation.

Dr. SEBRELL. This is a normal reaction. You visit the best physician you can find and learn that your condition is hopeless and nothing can be done and you grasp at a straw, any straw that appears. I hope, however, that physicians will refer many patients before they are hopelessly ill patients. Then we will be able to put many patients back on their feet quicker and better than ever before.

PROGRAM OF REHABILITATION

I hope one of our big accomplishments will be rehabilitation. You gentlemen are constantly hearing of rehabilitation to get sick people well and back to work. That is one of our objectives.

VISITING SCIENTIST PROGRAM

We have in mind another objective in this center that I should like to mention which we have called a visiting scientist program. We have regarded this clinical center as a national medical asset, not just as something that is a public Health Service research laboratory. We want to bring together here in this clinical center prominent scientists and research men from all over the country who have research ideas but who do not have the research facilities at home or the kinds of material that we will have here. We do not want to employ these people here as Government employees. We would like to have a professor in a university take 6 months and come on sabbatical leave and work on a problem.

I was rather interested to learn that both in the House and the Senate bills have been introduced to bring together groups of scientists to work on specific diseases and to concentrate in one place from all over the country to make an attack on cancer or other diseases.

Mr. SCHWABE. More or less all over the world.

Dr. SEBRELL. We do not want to confine ourselves to the United States. We want the knowledge, the best knowledge we can get anywhere and this clinic soon will be ideally suited to bring together scientists from all over the United States to work on cancer. Let them come together and work together and then go back home. We have called them visiting scientists. You will see them mentioned in each of the Institute appropriations. They will be cancer, mental health, heart, and other scientists. I wanted to explain what we had in mind and that, briefly, is what it is.

EXPLANATION OF REIMBURSEMENT ESTIMATES

As you know, another item that occurs through each of these Institutes is a reimbursement figure because we supply centrally certain research services to all the Institutes. Patient services are also handled this way because they operate as a central integrated hospital. These items, plus clinical investigations, visiting scientists, and supporting laboratory services all add up to the total increase requested for the clinical center.

STATUS OF COMPLETION AND ESTIMATED STAFFING REQUIREMENTS OF NEW BUILDING

Mr. FOGARTY. Will you tell us when you expect this to be complete to the extent that it will be fully occupied and staffed, and give us your estimate of what you expect to be the final number of personnel you are going to need there?

Dr. SEBRELL. I will be glad to do that.

TYPICAL FLOOR PLAN

I want to show you a photograph taken about 10 days ago which shows the stage of completion of the building. Here are two photographs. They show you how far the building has gone in its construction and, as you can see, the outside of the building is just about finished. The brick work is all done and they are engaged on the inside work. The roof is on. I also want to show you a typical floor plan in order to explain to you the parts of the building we have talked about. There is a typical floor plan located on the fifth floor. If you will look at that, the central parts of it, the part between the crossbars is the patient-care part of the building. On the north side are the clinical investigation laboratories. On the south side are all the patients' beds, so all patients will have a southern exposure.

PATIENT CARE AREA EXPECTED TO BE COMPLETE IN APRIL 1953

The patient care area we expect to be completed and ready to receive patients by the 1st of April 1953. The first 2 weeks of April in 1953 we have scheduled receiving 15 patients. The reason we schedule only that many at the outset is that this is a new building and we want to be sure something does not fail to operate like the elevators. We have to be sure of the service, the flow of medical supplies, the nursing service and janitor services.

These wings and the ends of the building are additional laboratories which are designed for the necessary laboratory research by the basic sciences—men who ought to work very closely with the clinical men.

The north wall laboratories are the laboratory services directly for the patients across the hall. All of that portion we expect to be occupied by April. A number of the laboratories in the east and west wings we do not expect to be ready by April but to come along progressively as they are needed.

We expect first to bring in our clinical men to come on to the staff from the hospitals where we have them now beginning their clinical

work. They would come to the north wall laboratories and start patient care in April. Following that will be the basic scientists in the laboratories in the wings. It is not essential that they move in in order to start the hospital section.

GRADUAL INCREASE OF PATIENT LOAD

The patient load builds up rather rapidly. The first 15 will be followed in the second week of April by 15 more so that by the middle of April we would have 30 patients. At the end of April, there would be 30 more making a total of 60 patients. Between the 1st and 15th of May we will take 30 more patients to make a total of 90. By the 31st of May enough to bring it up to 110; 20 more by the middle of June; 20 more would bring it up to 130, and by the end of June, the end of the fiscal year, we expect to have 150 patients. Then we go over to the next fiscal year gradually building up to our capacity to open 350 more beds during fiscal 1954, to reach a total of the capacity of 500.

FACTORS GOVERNING PATIENTS ADMISSION

Dr. DENTON. Pay patients?

Dr. SEBRELL. We hope it won't be necessary to apply a means test to select patients. We are sincere in wanting the ticket of admission to be a disease under research study. If we have to charge we have another factor—an economic factor in the selection of patients. The ticket of entrance then is not only the disease but having enough money to pay the price. I feel we should be able to study the disease and not have to consider other factors in selecting the patient. Appropriate methods can be provided for patients to pay if they are able and willing to do so.

Dr. TOPPING. I would like to inject a comment here. There undoubtedly will be certain people who do not wish to have medical service in relation to the research service provided free by the American Government. We have thought how we can satisfy our research needs and at the same time the feeling of many of the patients who will want to carry their own financial responsibility. A tentative arrangement that we are working on at the moment is reimbursement for services provided in an open account to the Treasury of the United States so the money is paid directly into the Treasury as the Public Health Service has done on fumigating of ships and quarantine.

Mr. DENTON. If they were able to pay, they would likely pay, but the fact they were not able to pay would not keep them out.

Dr. TOPPING. And the money would be paid directly into the United States Treasury.

PERSONNEL INCREASE REQUESTED

Mr. FOGARTY. Tell us about your personnel.

Dr. TOPPING. This year we are asking for a net increase of personnel of 1,044. They are all in connection with opening and operating the center.

Mr. FOGARTY. Will you give us the number you have available in 1952 for the operation of this center, the increase you are asking for in 1953 and a tentative estimate for the further increase in 1954.

Dr. TOPPING. You wish us to supply that for the record?

Mr. FOGARTY. Yes; and give us a breakdown of the data by appropriation—Cancer Institute, Heart Institute, and so forth.

Dr. TOPPING. We will give you a complete breakdown in that.

Dr. SEBRELL. In connection with personnel, I should say that in operating a building of this kind you will, no doubt, appreciate it is quite different from operating an office building. Disregarding such things as are required for research and operations and scientists and all of that, there will be sick people in it and it must be heated and maintained 24 hours a day. We cannot shut it down at 5 o'clock. That in itself means a tremendous difference in operating expenses as compared with any office building.

(Statement of personnel requested is as follows:)

Total clinical center costs, 1953 President's budget, all institutes

Subactivity	Arthritis		Micro		Neurology		Total National Institutes of Health	
	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount
Patient care	.....	($250,000)	.....	($250,000)	.....	($150,000)	.....	$650,000
Supporting laboratory services	.....	(91,300)	.....	(103,500)	.....	(11,700)	.....	206,500
Subtotal	.....	[1](341,300)	.....	[1](353,500)	.....	[1](161,700)	1,057	856,500
Maintenance of housing	.....	.....	.....	.....	.....	.....	8	20,000
Clinical investigations	52	210,000	4	35,000	12	45,000	68	290,000
Visiting scientist	4	7,000	4	7,000	5	7,000	13	21,500
Relocation of projects	.....	12,900	.....	21,400	.....	10,300	.....	44,600
Total	56	229,900	8	63,400	17	62,800	1,146	1,232,600

Subactivity	Cancer		Mental		Heart		Dental		Total	
	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount
Patient care	.....	$350,000	.....	$250,000	.....	$250,000	.....	.....	.....	$1,500,000
Supporting laboratory services	.....	177,300	.....	43,800	.....	87,700	.....	$17,200	.....	532,500
Subtotal	.....	527,300	.....	293,800	.....	337,700	.....	17,200	1,057	[2]2,032,500
Maintenance of housing	.....	.....	.....	.....	.....	.....	.....	.....	8	20,000
Clinical investigations	50	125,000	25	80,000	23	700,000	18	35,000	184	600,000
Visiting scientist	2	7,000	7	7,500	3	7,000	3	7,000	28	50,000
Relocation of projects	.....	28,400	.....	23,900	.....	48,000	.....	5,100	.....	150,000
Total	52	687,700	32	405,200	26	462,700	21	64,300	[3]1,277	2,852,500

[1] Figures represent distribution of the pro rata costs of clinical center services budgeted centrally for the 3 institutes financed under the central National Institutes of Health appropriation. Those costs are shown parenthetically for illustrative purposes only and are not reflected in subactivity totals for these 3 institutes.

[2] Excludes $70,000 reimbursements for employees' meals from outside sources.

[3] Includes 56 positions and $151,262 carried in 1952; increase in 1953 is 1,221 positions and $2,701,238.

Clinical center operations—patient care and supporting services, clinical investigations, visiting scientist and housing costs, fiscal year 1952, estimate fiscal year 1953

Activity	1952		1953	
	Positions	Amount	Positions	Amount
Office of director	6	$28,000	8	$41,000
Patient inquiry			11	18,000
Total, Office of director	6	28,000	19	59,000
Professional services:				
Office of chief	2	5,200	2	13,190
Anesthesiology			5	11,760
Pathology:				
Human			6	15,550
Clinical			24	39,000
Diagnostic X-ray			9	19,500
Radiotherapy			5	15,200
Pharmacy and central supply			11	13,950
Dentistry	2	5,200	11	22,500
Medical records			21	20,250
Rehabilitation, physical therapy, and occupational therapy	1	2,000	12	27,450
Total, professional services	5	12,400	106	198,350
Technical services:				
Blood bank			3	2,250
Basal metabolism rate			2	1,390
Electroencephalogram			3	5,800
Electrocardiogram			1	680
Electrokymograph			1	680
Total, technical services			10	10,800
Nutrition service	2	2,500	91	116,000
Nursing service	14	32,602	227	387,000
Outpatient and admitting service	2	8,550	12	24,950
Supplementary patient service:				
Social service	3	4,850	12	31,900
Volunteers (supervision)			1	4,950
Miscellaneous services			8	24,250
Total, supplementary patient service	3	4,850	21	61,100
Scientific reports:				
Special events			1	1,250
Library			6	11,250
Medical arts			2	2,150
Photo-research			2	1,800
Translating			1	950
Total, scientific reports			12	17,400
Plant management:				
Business operations	7	15,600	65	115,000
Housekeeping	6	5,200	108	80,000
Transfer of patients			1	1,500
Plant operations:				
Laboratory aids			24	16,900
Plant protection	1	800	87	56,900
Mechanical engineering section	1	1,000	113	152,020
Electric shop	1	650	42	47,800
Cabinet and paint shop			31	37,800
Miscellaneous shops (plumbing, machine, vehicle repair)	1	650	42	40,000
Office of chief (administrttive services, plans, and specifications)			17	23,200
Sanitary engineering	6	26,700	9	35,000
Laundry	1	600	20	17,300
Total, plant operations	11	30,400	385	436,920
Total, plant management	24	51,200	559	633,420
Panel of consultants				7,500
Total	56	140,102	1,057	1,515,520

Clinical center operations—patient care and supporting services, clinical investigations, visiting scientist and housing costs, fiscal year 1952, estimate fiscal year 1953—Continued

Activity	1952		1953	
	Positions	Amount	Positions	Amount
Deduct:				
Quarters and subsistence		$1,440		$20,000
Reimbursement for meals				24,000
Net costs		138,662		1,471,520
Other objects [1]		12,600		560,980
Total patient care and supporting services	56	151,262	1,057	2,032,500
Deduct: Reimbursements from other Institutes				1,176,000
Net patient care and supporting services, National Institutes of Health appropriation	56	151,262	1,057	856,500
Clinical investigations			68	290,000
Visiting scientists			13	21,500
Housing			8	20,000
Relocation of projects				44,000
Total, clinical center (included in NIH appropriation) [2]	56	151,262	1,146	1,232,000

[1] See "Schedule of other objects."
[2] Excludes costs of clinical investigations, visiting scientists, and relocation of projects programs carried by other NIH appropriations.

Schedule of other objects

	1952	1953		1952	1953
02 Travel	2,000	35,000	08 Supplies and materials	2,000	322,000
03 Transportation of things	1,500	15,000	09 Equipment	5,000	20,000
04 Communication services	500	30,000	15 Taxes and assessments	100	14,980
05 Rents and utility services		75,000			
06 Printing and reproduction		14,000	Total	12,600	560,980
07 Other contractual services	1,500	35,000			

Total clinical center costs—Tentative 1954 projection

[All institutes]

Subactivity	Arthritis		Microbiology		Neurology		Total National Institute of Health		Cancer		Mental		Heart		Dental		Total	
	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount	Positions	Amount
Patient care	.....	($865,200)	.....	($540,700)	.....	($432,600)	.....	$1,838,500	.....	$1,345,000	.....	$1,076,500	.....	$1,130,000	.....	.....	.....	$5,390,000
Supporting res. services	.....	(326,100)	.....	(383,500)	.....	(38,400)	.....	748,000	.....	630,500	.....	152,800	.....	324,800	.....	$57,400	.....	1,913,500
Subtotal	.....	[1](1,191,300)	.....	[1](924,200)	.....	[1](471,000)	2,021	2,586,500	.....	1,975,500	.....	1,229,300	.....	1,454,800	.....	57,400	2,021	7,303,500
Maintenance of housing	.....	.....	.....	.....	.....	.....	5	32,000	.....	.....	.....	.....	.....	.....	.....	.....	5	32,000
Clinical investigations	92	512,000	16	120,000	40	250,000	148	882,000	80	400,000	68	560,000	62	275,000	23	170,700	382	2,287,700
Visiting scientist	8	72,000	4	40,000	7	45,000	19	157,000	16	45,000	14	87,000	14	35,000	7	49,300	70	373,300
Total	100	584,000	20	160,000	47	295,000	2,193	3,657,500	96	2,420,500	82	1,876,300	77	1,764,800	30	277,400	2,478	[2]9,996,500

[1] Figures represent distribution of the pro rata costs of clinical center services budgeted centrally for the 3 institutes financed under the central National Institute of Health appropriation. These costs are shown parenthetically for illustrative purposes only and are not reflected in subactivity totals for these 3 institutes.

[2] The tentative projection for 1954 reflects a lapse on all new positions based on relating clinical center staffing to the rate of bed activation in fiscal 1954. Present plans for activation of beds indicate that the maximum 500-bed level will not be reached until June of 1954; personal service costs for fiscal 1955, therefore, will be proportionately higher.

Clinical center operations: Patient care and supporting services, clinical investigation, visiting scientists, and housing costs; tentative projection for fiscal year 1954

Activity	Positions	Amount
Office of director, clinical center	20	$82,000
Professional services	254	883,500
Technical services	19	58,500
Nutrition service	195	542,000
Nursing service	647	1,854,000
Out patient and admitting service	16	69,000
Supplementary patient service	51	222,500
Scientific reports	13	58,300
Plant management	806	2,176,700
Panel of consultants		100,000
Total	[1] 2,021	6,046,500
Deduct:		
Quarters and subsistence		68,000
Reimbursement for meals		75,000
Net costs		5,903,500
Other objects		1,400,000
Total patient care and supporting services		7,303,500
Deduct: Reimbursement from other institutes		4,717,000
Net patient care and supporting services, National Institutes of Health appropriation		2,586,500
Clinical investigations and visiting scientists	167	1,039,000
Housing	5	32,000
Total, clinical center (included in NIH appropriation)	2,193	[2] 3,657,500

[1] The increased positions in fiscal year 1954 over fiscal year 1953 are lapsed approximately 50 percent.
[2] Excludes costs of clinical investigations and visiting scientists programs carried by other NIH appropriations.

POSSIBLE ADDITIONAL COST DUE TO ESCALATOR CLAUSE

Dr. TOPPING. Mr. Chairman, I would like to point out some of the difficulties we envisage in the next year or so. We have some problems.

The first problem involves, perhaps, the necessity of invoking that provision of the appropriation originally made that carries an escalation authority. The costs of construction have gone up considerably. When this committee made its appropriation after the rather sad experience it had with the situation at St. Elizabeths—each time the cost had gone up so they never got the laundry—the committee thought it wise to put in an escalation clause so if costs did go up an adjustment could be made.

We are not at all sure that escalation is at all necessary. We rate the present completed cost at $39,230,000. We hope we will not have to ask for an additional $770,000 to come up to the total cost limitation of $40,000,000 on stage I. Also the escalation is a possible necessity that we might have to invoke since it now amounts to $850,000 on stage I and $375,000 on stage II.

On requirements for equipment and supplies our estimates of $9,635,000 were made in 1949 at pre-Korean prices, so the same funds today will buy only about $8,700,000 of our needs. I mention this because it may be necessary later to request additional funds to take care of the increased prices.

RESEARCH AND TRAINING GRANTS PROGRAM

Mr. FOGARTY. Now, I would like you to tell us a little more about the research grants, these direct research projects and research fellowships and training stipends.

Dr. TOPPING. There is a program of general support of basic research which is not in any one of these specific categories. Dr. Price is here, Dr. Sebrell's Associate Director, and he is in charge of the general program.

ESTIMATED COST OF RESEARCH PROJECT GRANTS

Mr. FOGARTY. I think you should tell us something about that.

Dr. PRICE. You will find at the bottom of page 121 a break-down of the funds for research project grants. That, you will note, shows an amount listed for each of the three institutes whose directors made statements on the record earlier this morning, and an amount entitled "General medical research," 465 projects amounting to $4,290,000.

There is rather a wide variety of scientific work which does not clearly enter any one of the categorical institutes. We have many aspects of basic medical science, studies on physiology and biochemistry and subjects of general public-health measures, such things as service on community needs in the public health field.

The wide variety of work in environmental sanitation—the provision of better knowledge about the atmosphere and pollution, sanitation of water supplies, and things of that nature which are covered in this fund.

ESTIMATED COST OF FELLOWSHIP PROGRAM

We have on the following page, page 122, a similar kind of break-down for the fellowship program, and there you will notice provision for 218 fellowships in this appropriation in the general medical research field, an amount of $400,700.

PROCEDURE USED TO SELECT RESEARCH FELLOWS

Mr. FOGARTY. How does a person qualify for one of these fellowships?

Dr. PRICE. The procedure used for selecting research fellows is similar in each of the programs, and I would like to tell you the procedure we follow where the applicant is finally supported by the Arthritis Institute or out of this general medical research fund or even cancer or heart fellowship.

We require the applicant first of all to make his own tentative connections with a sponsor who has facilities with his laboratory and has ability to train the young man. He then applies to us, submitting the usual personal data concerning his training and previous experience, and these data are then followed up on a board system by some of our senior scientific staff.

MEMBERS OF FELLOWSHIP BOARD

Mr. FOGARTY. Will you put the names of the members of that board in the record.

Dr. PRICE. I will be glad to provide the names of the members of the fellowship boards.

(Statement referred to follows:)

NATIONAL MICROBIOLOGICAL INSTITUTE SPECIALTY BOARD

Dr. D. J. Davis, (1) Chief, Influenza Unit and Epidemiologic Section, NMI; (2) executive secretary, influenza information center, influenza study program, World Health Organization.
Dr. J. Greenberg, Head, Unit of Developmental Chemotherapy, Laboratory of Tropical Diseases, NMI.
Dr. R. Hanan, Chief Basic Study Section on Immunology, Laboratory of Infectious Diseases, NMI.
Dr. W. T. Haskins, Head, Unit on Control of Intermediate Host Invectors, Laboratory of Tropical Diseases, NMI.
Dr. G. Hottle, (1) Chief, Section on Virus Vaccines and Basic Studies; (2) Head, Rabies Virus and Vaccine Unit, Laboratory of Biologics Control, NMI.
Dr. M. Pittman, Head, Hemophilus Unit, Section on Bacterial Toxins and Vaccines, Laboratory of Biologics Control, NMI.
Dr. L. Karel, chief, extramural program, NMI.

NATIONAL INSTITUTES OF HEALTH SPECIALTY BOARD

Dr. G. H. Algire, Head, Transparent Chamber Unit, Laboratory of Biology, NCI.
Dr. L. W. Law, Head, Luekemic Studies Section, Laboratory of Bioloky, NCI.
Dr. F. J. McClure, Chief, Section on Oral and Biological Chemistry NIDR.
Dr. N. McCullough, Chief, Brucellosis Unit, Laboratory of Infectious Diseases, NMI.
Dr. T. E. O'Brien, Office of Director, NHI.
Dr. N. K. Richtmyer, member, Section of Carbohydrates, NIAMD.
Dr. H. Tabor, member, Section on Pharmacology and Toxicology, Laboratory of Pharmacology and Pathology, NIAMD.
Dr. W. H. Wright, (1) Assistant Director, NMI; (2) Chief, Laboratory of Tropical Diseases, NMI.

CENTRAL QUALIFICATIONS BOARD

Dr. H. W. Chalkley, Assistant Chief, Grants and Fellowships Branch, NCI.
Dr. D. J. Davis, (1) Chief, Influenza Unit and Epidemiologic Section, NMI; (2) executive secretary, influenza information center, influenza study program, World Health Organization.
Dr. J. Eberhart, Chief, Research Grants and Fellowships Branch.
Dr. R. E. Scantlebury, Chief, Research Fellowships Branch, Division of Research Grants.
Dr. R. M. Stephan, Acting Chief, Oral Bacteriology Section, NIDR.
Dr. H. Tabor, member, section on Pharmacology and Toxicology, Laboratory of Pharmacology and Pathology.

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Dr. Joseph M. Bobbitt, Ph. D., Chief, Professional Services Branch.
Dr. John A. Clausen, Ph. D., Chief, Social Science Research.
Dr. John C. Eberhart, Ph. D., Chief, Research Grants and Fellowships Branch.
Dr. Wade H. Marshall, Ph. D., neurophysiologist.
Dr. Seymour D. Vestermark, M. D., Chief, Training and Standards Branch.
Dr. Morton Kramer, D. Sc., Chief, Biometrics Branch.
Dr. F. L. Stone, Ph. D., chief, extramural programs

NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

Dr. G. H. L. Dillard, Chief, Section on Metabolic and Degenerative Diseases.
Dr. L. A. Heppel, member, Section on Enzymes and Metabolism.
Dr. J. C. Kereśztesy, Chief, Section of Fractionation of Isolation.
Dr. R. E. Knutti, chief, extramural programs.
Dr. N. K. Richtmyer, member, Section on Carbohydrates.
Dr. H. Tabor, member, Section on Pharmacology and Toxicology, Laboratory of Pharmacology and Pathology.

Dr. PRICE. After the individual has been demonstrated to have general qualifications for this type of training, his application is then reviewed by another board, depending on the general field in which he

wishes to have his training. If it is cancer, we have a separate cancer fellowship specialty board to consider fellows in that field.

If his interest is in arthritis, there is another board to review his application. At that point the things taken most into consideration are the kind of program which the individual has cut out for himself rather than his own personal qualifications and also the character of training environment which he has selected. If these are appropriate and it appears that the individual is going to get a type of training which is needed in his professional environment, then the award is made on a competitive basis.

FINAL SCREENING OF FELLOWSHIP AWARDS ON COMPETITIVE BASIS

Mr. FOGARTY. What do you mean "on a competitive basis"?

Dr. PRICE. The boards make their judgment as to which of the individuals are best qualified and which have chosen the best sponsor and the best environment in which to get training. We have found that by and large we have some four times as many applicants whom the first screening board feels are generally qualified for training than we have funds to support and it is necessary to weed out three of the four in making the awards. The general basis I have just described.

AVERAGE COST OF FELLOWSHIPS

Mr. FOGARTY. What is the average cost of these fellowships?

Dr. PRICE. The average cost is in the neighborhood of $3,500. We have three levels of fellowship, one for men who have not yet secured their doctoral degree, another for those who have attained that degree, and another in which the stipend is tailored to the fellow's degree of accomplishment.

BUDGET BREAKDOWN OF FELLOWSHIP CATEGORIES

Mr. FOGARTY. Would you give us a breakdown of those three categories?

Dr. PRICE. Yes, sir.

(Statement referred to follows:)

Predoctorate research fellowships (average cost, $2,103)	$227,150
Postdoctorate research fellowships (average cost, $3,797)	356,950
Special research fellowships (average cost, $4,056)	64,900

Mr. FOGARTY. Are your grants made to medical schools or scientific laboratories?

Dr. PRICE. There may be a wide variety of institutions and individuals. According to law, the funds are also available to individuals who have no institutional connection, although that is a very infrequent occurrence; nearly all of the grants are made to medical schools or universities.

Mr. FOGARTY. Will you give us a breakdown of those receiving these grants?

Dr. PRICE. Yes, sir.

(The information referred to appears on p. 638.)

Mr. FOGARTY. Doctor, have you finished your statement?

ABILITY TO SECURE ABLE RESEARCH MEN

Dr. SEBRELL. I have one more point to which I wish to refer. You heard this morning about some of the accomplishments and the plans for this appropriation.

I wish to mention now the quality of men that we have at the National Institutes of Health. The question sometimes comes up as to our ability to secure able research men. This morning I introduced the names of some of the senior research men—Dr. Haas, Dr. Pearce Bailey, and Dr. Russell Wilder.

You can see the quality of men we are getting to head these institutes.

I wish to refer here to some of the young men we have out there. One of the ways of measuring accomplishments in research is by the recognition these young men get from their colleagues, by various awards from societies and things of that kind.

EXAMPLES OF PROMINENT AWARDS WON BY SCIENTISTS IN INSTITUTE

One of the prominent awards in medicine in this country is the Bailey K. Ashford award which is in the field of tropical diseases and is awarded by the Society for Tropical Medicine and has been in existence for 10 years. It has been awarded six times and of the six times it has been awarded, it has been won three times by a young scientist at the National Institutes of Health.

One of the qualifications of that award is that the man must be under 36 years of age.

Another prominent award in this country is known as the Paul Lewis award, which is administered by the American Chemical Society and young men at the NIH have now won that award for 2 years in succession. In that connection, the current issue of this chemical journal, Chemical and Engineering News for January 28, carries the photograph of one of our men on its back cover. This is Dr. Horecker, who is the man who just won the Paul Lewis award.

In this article which is entitled "Bernard L. Horecker Honored for Work in Enzyme Chemistry," it says, "It is rather like lightning striking twice in the same spot for this award to be given twice in succession to the laboratory."

Another scientific recognition in this country is membership in the National Academy of Sciences, which is the most august body of scientists in this country. They elect only 30 members each year and at the National Institutes of Health in recent years we have had four members of the academy. Two of those men have recently retired and the other two are on active duty at Bethesda.

I could mention a number of other awards that men have had, but I just wanted to cite a few examples to show you that we are getting and are attracting young men of outstanding research ability in the face of larger opportunities from a financial viewpoint elsewhere.

We attract them because of the opportunity to do research work here in a good research atmosphere.

In conclusion, I again want to extend to this committee a cordial invitation for the members to visit the National Institutes of Health at any time. We are delighted to have you come out and see what we are doing and see the progress that is being made.

OTHER RECENT HONORS AND AWARDS

Mr. Chairman, I might introduce for the record a list of some more names of our men and some of the honors they have been awarded in recent years. It will make the list a little more complete.

Mr. FOGARTY. Without objection, the list will be included in the record at this point.

(The list referred to follows:)

RECENT HONORS AND AWARDS—NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE

Dean, Dr. H. Trendley: The Gorgas award was presented to Dr. Dean in December 1949 by the Association of Military Surgeons of the United States "for distinguished service to our military forces in furthering the recognition of the fluorides as agents in causation and in treatment of dental maladies. Dr. Dean, an outstanding leader in dental research, developed a method for the quantitative measurement of enamel fluorides and thus made possible the establishment of a minimal threshold of dental fluorosis. This research led to the fruitful study of the relation between fluorine content of water supplies and prevalence of dental cavities, a study that promises a measure of control of this commonest of dental diseases." For his work in this field, Dr. Dean was also awarded the Jarvie Fellowship medal in 1951. This award is made annually by the Dental Society of New York to the dentist who, in its judgment, has contributed results of original research or whose high attainments in professional career have been such as to have materially advanced the science and art of dentistry.

Hampp, Dr. Edward G.: Received the 1949 academy award in the biological sciences of the Washington Academy of Science, the first dentist to be so honored. He was selected for his original and fundamental contributions to the knowledge of diseases of the oral cavity. Dr. Hampp was the first to isolate *Borrelia vincenti*, a microorganism of the spirochete family, in pure culture, thus making possible new approaches to the study of these organisms.

Huebner, Dr. Robert J.: Received the Bailey K. Ashford award, bestowed by the American Society of Tropical Medicine, in 1949 for his outstanding research on Rickettsial pox and Q fever.

Horecker, Dr. Bernard L.: Awarded the 1951 Paul-Lewis Laboratories award by the American Chemical Society for his contribution to enzyme chemistry. Dr. Horecker identified a compound occurring in the synthesis in cells of the 5-carbon sugars, furthering the understanding of the mechanism of the synthesis of these important building blocks of cell components. Heretofore, this compound has not been known to exist.

Greenstein, Dr. Jesse P.: Awarded the annual Carl Neuberg medal of the American Association of European Chemists and Pharmacists of New York in 1950 for meritorious contributions to chemistry and biochemistry. (Dr. Neuberg is one of the founders of modern biochemistry, and is believe to have coined the term "biochemistry" in 1906.) Dr. Greenstein was honored for his notable research in the field of biochemistry of cancer. He and his collaborators developed a simple, low-cost method for the mass-scale production of "essential" amino acids, which can now be fed intravenously to patients, and thus can be utilized by the body without passing through the mouth and digestive tract. This is a life-saving technique for supplying vital food products to patients with an obstruction or malfunctioning of their digestive tract.

Kornberg, Dr. Arthur: Recipient of 1950 Paul-Lewis Laboratories award from the American Chemical Society for his contributions to enzyme chemistry. He was honored for his discovery of a mechanism by which the body utilizes high-energy phosphate compounds in producing coenzymes essential to cellular respiration.

Rosen, Dr. Leon: Citation and award of 800 pounds by the South Pacific Commission (an intergovernmental agency) in 1952 for his outstanding contributions to tropical-disease research. Dr. Rosen has been conducting entomological studies of filariasis, a parasitic disease that afflicts about 60 percent of the Tahitian population and occurs in practically all warm countries.

Small, Lyndon F.: Dr. Small was elected to membership in the National Academy of Sciences in 1942, 2 years after he joined the staff of the National Institutes of Health. This is a signal honor, as only 30 new members are elected each year.

The Hillebrand prize of the Washington section, American Chemical Society, was awarded to Dr. Small in 1949 for "outstanding contributions to the chemistry of alkaloids."

Topping, Dr. Norman H.: Awarded the Eli Lilly Co.'s Bailey K. Ashford award in 1943 for demonstrated research in tropical medicine. This award is administered by the American Society of Tropical Medicine, which further recognized his accomplishments by electing him its president for the year 1949–50. In 1944 the Washington Academy of Sciences bestowed its award for outstanding achievement in the biological sciences to Dr. Topping in recognition of his distinguished services in identifying eastern and western types of Rocky Mountain spotted fever.

Walt James: The American Society of Tropical Medicine bestowed the Bailey K. Ashford award on Dr. Watt in 1945 for his work in enteric diseases. In 1948 Dr. Watt became director of the Commission on Enteric Diseases of the United States Army Epidemiology Board.

Wyckoff, Dr. Ralph W. G.: Was elected in 1951 a foreign member of Britain's Royal Society. Foreign membership is restricted to a maximum of 50, and Dr. Wyckoff was chosen, with 2 other Americans and a Norwegian, from among men of the greatest scientific eminence abroad. The Royal Society is the oldest scientific society in Great Britain, and one of the oldest in Europe. Dr. Wyckoff was recognized for his pioneering work in the application of the electron microscope to scientific research, making it an important and usable new tool. Dr. Wyckoff was appointed a foreign member of the Royal Netherlands Academy of Sciences in 1949, and the same year was elected to the National Academy of Sciences, one of the highest honors that can come to a scientist in this country.

Mr. FOGARTY. Mr. Schwabe?

RESEARCH TO DEVELOP CURE FOR ARTHRITIS

Mr. SCHWABE. Doctor, I just wanted to ask you a few questions.

I have been interested in your statement and yet there are a few items that occurred to me upon which I would like further enlightenment. For instance, in arthritis, you mentioned that as one of the subjects that is receiving considerable attention now and you expect to give more attention to it at Bethesda as time goes on.

Of course, I think that is commendable and I want to encourage it, but up until now, so far as medical science has been able to develop cures, there is practically no cure for arthritis; is that not correct?

Dr. SEBRELL. That is correct.

Mr. SCHWABE. It is one of those human ailments that has baffled all efforts so far to cure the disease?

Dr. SEBRELL. That is right.

Mr. SCHWABE. There is more than one form of the disease. There are many, are there not?

Dr. SEBRELL. Yes.

Mr. SCHWABE. Is there anything in the offing without necessarily asking you to state what it may be, which really offers great encouragement for the immediate future of an effective cure?

Dr. SEBRELL. I cannot say I see anything in the immediate future offering effective cure, but there are a number of lines of investigation being followed in research which conceivably could uncover something.

In addition to the field that is opened up by cortisone and ACTH, there are some other fields that are also of promise. There is a compound known as hyalurondase which has to do with connective

tissue and the formation of scar tissue and the movement of fluids between tissues and, as you know, in arthritis you frequently get fluid in the joints for some unknown reason.

If we understood more of the activity of hyaluronadase it is possible we would again get a new lead into arthritis.

The possible role of some vague, metabolic disturbance that we now do not understand, related to the endocrine glands, is another possibility.

The third possibility is that there are some allergic manifestations. A few years ago we were in a blind end on allergies. Now we have histamine and the antihistamine drugs and we may find something in that field.

The possible role of infections, or the allergic manifestations to bacterial toxins, all those things are within the realm of possibility, but I cannot say I see in the offing any immediate hope of curing arthritis.

PROGRESS IN TREATMENT OF ARTHRITIS

Mr. SCHWABE. As a matter of fact, is it not true that you have not—and when I say "you," I mean medical science and research—yet advanced to the point in dealing with arthritis in its manifold form where the progress of the disease has been as much retarded as is true with many other diseases where a definite cure has not yet been established or discovered?

Dr. SEBRELL. I think that is true. In some forms of arthritis there is little retardation of the progress, in osteoarthritis, for example.

Mr. SCHWABE. The results are small and seem to be only temporary. Is that true?

Dr. SEBRELL. That is true, and much can be done in the field of physical therapy and rehabilitation activities.

In all of the excitement over cortisone and rheumatoid arthritis, people who know the various forms of arthritis still say that in the form known as osteoarthritis physical therapy gives a great deal of relief and if properly used can rehabilitate many of them to more comfortable, workable lives.

In that sense, you might say it retards it by keeping them on their feet, but actually the process goes on.

Dr. TOPPING. Mr. Schwabe, might I make a comment there? I think it can be pointed out that in arthritis it is perhaps a metabolic disease and several such diseases, such as pernicious anemia and diabetes, even though the permanent cure has never been found, that effective therapeutic measures have been discovered which will allow the individual, as long as they are under therapy, to continue a perfectly normal, productive life to the full extent of their normal expectancy and usually death comes from something else.

So even though we cannot say there is a cure for arthritis, it is possible that cortisone or one of these compounds might react as in the other cases.

Mr. SCHWABE. Arthritis is not rated high among the killers anyway, is it?

Dr. SEBRELL. No; but it is high in disability.

Mr. SCHWABE. It is certainly high in disability and economic loss and all that sort of thing.

Dr. SEBRELL. I believe Dr. Wilder was estimating about 1 person in every 20 has some form of arthritis or arthritic trouble.

Mr. SCHWABE. I want to congratulate you for telling us what you anticipate in the way of further requests for funds in connection with completion of the institution out there at Bethesda, and for trying to steer this committee straight in telling us about the unexpended and obligated funds.

I trust as we go along you will continue to do that, and other groups will. At least to me it is a great help.

I think that is all, Mr. Chairman.

Mr. FOGARTY. Do you have any further statement to make, Dr. Sebrell?

Dr. SEBRELL. I do not believe so.

Mr. FOGARTY. Thank you very much, Doctor.

LANGUAGE CHANGE

Dr. HARLOW. We have one language change in that item, Mr. Chairman.

Mr. FOGARTY. Where is that?

Dr. HARLOW. We are substituting the word "therapeutic" for "adrenocorticotropic hormone (ATCH), cortisone and other," in substance which we are able to grant to institutions for research purposes.

Dr. TOPPING. The reason for that is that we changed that wording over the last several years. There have been streptomycin, ACTH, cortisone, and so forth, and the change in wording makes it more or less routine without having to specify what happens to be the new agent for research during that particular year.

Mr. FOGARTY. Do you have some demonstration activities? I note you are adding that word in the language.

Dr. TOPPING. Yes; we have demonstration and research. That is because of the new institutes that have come into existence; we have some projects which we refer to as demonstrations upon which we make these compounds available to the people who will be doing the work; demonstrations of the use of it, shall we say.

Mr. FOGARTY. Thank you.

THURSDAY, JANUARY 31, 1952.

NATIONAL CANCER INSTITUTE

WITNESSES

DR. JOHN R. HELLER, DIRECTOR, NATIONAL CANCER INSTITUTE
DR. NORMAN H. TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$20,086,000	$19,500,000	$15,371,000
Transferred to "Salaries and expenses, defense production activities, Federal Security Agency," pursuant to Public Law 253		−24,000	
Adjusted appropriation or estimate	20,086,000	19,476,000	15,371,000
Proposed supplemental due to pay increases		200,000	
Applied to contract authorization	−5,000,000	−4,625,000	
Total available for obligation	15,086,000	15,051,000	15,371,000
Unobligated balance, estimated savings	−420,770		
Obligations incurred	14,665,230	15,051,000	15,371,000
Comparative transfer to—			
"Assistance to States, general, Public Health Service"	−38,365	−45,000	
"Salaries, expenses, and grants, National Heart Institute, Public Health Service"	−200,000		
Total obligations	14,426,865	15,006,000	15,371,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Grants:			
(a) Grants for research and training:			
(1) Research projects	$3,129,079	$3,100,000	$3,100,000
(2) Research fellowships	523,771	500,000	500,000
(3) Teaching of medical subjects	2,037,470	2,040,000	2,040,000
(4) Training stipends	359,888	375,000	375,000
(b) Grants for detection, diagnosis, and other control services	3,033,908	3,100,000	3,100,000
(c) Grants for special control projects	926,313	900,000	750,000
2. Direct operations:			
(a) Research	3,639,162	4,137,000	4,700,000
(b) Other direct operations:			
(1) Technical assistance to States	380,072	415,000	378,000
(2) Review and approval of research and training grants	62,445	85,000	78,000
(3) Administration	334,757	354,000	350,000
Total obligations	14,426,865	15,006,000	15,371,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	650	631	676
Full-time equivalent of all other positions	10	7	7
Average number of all employees	585	594	595
Average salaries and grades:			
General schedule grades:			
Average salary	$4,020	$4,528	$4,522
Average grade	GS–6.2	GS–6.2	GS–6.2
Crafts, protective, and custodial grades:			
Average salary	$2,522	$2,878	$2,883
Average grade	CPC–3.3	CPC–3.3	CPC–3.3
Ungraded positions: Average salary	$7,100	$11,708	$11,106
01 Personal services:			
Permanent positions	$2,456,276	$2,801,103	$2,839,336
Part-time and temporary positions	32,101	29,650	28,559
Regular pay in excess of 52-week base		9,196	9,076
Payment above basic rates	15,352	14,726	14,694
Total personal services	2,503,729	2,854,675	2,891,665
02 Travel	67,249	72,250	74,150
03 Transportation of things	9,720	6,750	11,750
04 Communication services	15,068	15,900	15,900
05 Rents and utility services	1,435	1,500	1,500
06 Printing and reproduction	44,310	61,575	60,960
07 Other contractual services	51,500	179,000	192,200
Reimbursement to "Operating expenses, National Institutes of Health, Public Health Service"	946,152	1,058,180	1,585,480
08 Supplies and materials	417,774	412,030	410,355
09 Equipment	361,879	331,000	263,100
11 Grants, subsidies and contributions	10,010,429	10,015,000	9,865,000
15 Taxes and assessments	1,962	3,900	4,700
Subtotal	14,431,207	15,011,760	15,376,760
Deduct charges for quarters and subsistence	4,342	5,760	5,760
Total obligations	14,426,865	15,006,000	15,371,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$16,141,828	$10,808,091	$5,211,025
Obligations incurred during the year	14,665,230	15,051,000	15,371,000
	30,807,058	25,859,091	20,582,025
Deduct:			
Unliquidated obligations, end of year	10,808,091	5,211,025	3,810,779
Adjustment in obligations of prior years	295,401		
Obligated balance carried to certified claims account	70,379		
Total expenditures	19,633,187	20,648,066	16,771,246
Expenditures are distributed as follows:			
Out of current authorizations:			
Out of appropriations to liquidate prior-year contract authorization	3,329,934	3,125,000	
Out of new obligational authority	11,196,707	11,516,000	12,025,000
Out of prior authorizations	5,106,546	5,815,066	4,738,246
Out of anticipated 1952 supplemental for pay increases		192,000	8,000

Mr. FOGARTY. The committee has before it the National Cancer Institute. Dr. Heller, do you have a statement for the committee?

Dr. HELLER. Mr. Chairman, I have no prepared statement for the committee, but I would like to describe the cancer program.

Mr. FOGARTY. Go right ahead.

GENERAL STATEMENT

Dr. HELLER. The program of the National Cancer Institute reduced to its simplest element is to reduce the mortality from cancer.

In order to achieve that purpose, the program has a three-pronged approach. The first of these is the conduct of direct operations or intramural research, as originally charged by the Congress in very broad terms of reference, for investigation into the cause, diagnosis, the treatment and prevention of cancer.

The second prong is that of participation in programs of disease control working with State health departments, medical schools, and other institutions, primarily in the application of what we know, to what needs to be done in the cancer field. This involves the training of physicians, the provisions of diagnostic facilities, education of lay persons, and the other field activities of concern to the practicing physician and to the patient.

The third prong or the third front of our attack is support of research and training in nonGovernmental institutions.

About three-fourths of our resources and activities are involved in work outside of our own institution in Bethesda. By that I mean grants to States, grants to institutions, and training activities, and so forth.

CANCER RESEARCH STUDIES

I would like to relate some of the things we consider to be significant in the control of cancer—I use the word "control" in a very broad sense.

In the area of research, at Bethesda, we have tested 2,800 compounds which were either believed to have, or at least from the chemical composition should have, some effect upon tumors. It has been found that 400 of these compounds do have some tumor-damaging effect.

Further screening of these compounds has reduced this number to some dozen compounds which have been found to have more than ordinary tumor-damaging properties.

Intensive studies have been carried on in these particular compounds, and also syntheses of other compounds related to them, the so-called analogues or, the first cousins, chemically.

There is some promise in this field, but as yet no one compound or even series of compounds can be placed in the hands of the private physician to enable him to do the sort of job we want him to do and to take its place in the field of therapy. As you are well aware, we now only have surgery and radiation as our tools in the treatment or management of cancer.

We look hopefully to so-called chemotherapy for the third member of this triad.

Some advances have been made with chemical compounds. For instance, the so-called antifolic compounds have been found to be very useful in the treatment of leukemia. They are not curative. They arrest the course of the disease in some instances which is called a remission whereby the youngster is enabled to live for a year or 2 years or 3 years longer than otherwise would have been expected had the disease run its natural course.

I was in Boston the other day where some of the best work in the country is being done in the use of antifolic drugs. I attended the dedication of the magnificent new cancer-research building of the Children's Hospital which the Variety Club and the Boston Braves sponsored and for which a grant was given from the construction funds which Congress made available. It was really an inspiring thing to see what is going on there. I think some of the best work in the country in the management of leukemia is undertaken there.

I saw a little girl who had an inital diagnosis of leukemia and was near death in the spring of 1949. Through the use of so-called antifolic compounds and also with the use of cortisone and ACTH and other compounds known to have some effect on leukemia, she is at present living and going to school and is a fairly healthy little girl. The outlook is not good for her, but she has been enabled to live this long when the ordinary expected longevity would be perhaps only a few months from the time of onset.

I mention this instance to indicate that while we do not and have not arrived at a conclusive, definitive place in so-called chemical therapy of cancer, at least, we are at a place in which we see definite progress. We can enable some of these people to have a longer life. Also, in the interval we hope that there may emerge other compounds which may lengthen the term of life, or perhaps even cure the patient of cancer.

I think this advance in the research in so-called chemo-therapeutic compounds is a very significant advance, Mr. Chairman.

Another advance we believe to be significant, which happens to have been done at our own place, has been the use of massive doses of estrogen. That is the female hormone, in water solution, given intravenously over a period of as long as a day at a time. Far-advanced breast and prostate cancers have been improved to some extent. Not all of them improved with this treatment, but some of them have been given very promising benefits, as far as lengthening of life is concerned.

Again, no cure has been effected. This is all part of this series of approaches to the treatment of cancer by so-called hormones. I believe Dr. Scheele related to you the work that Dr. Huggins is doing in Chicago in taking out both adrenal glands, which removes from the body a primary source of the male hormone, which apparently has a great deal to do in the progression of breast cancers and prostate cancers in particular.

Therefore, on several fronts investigators with the use of hormones—particularly the sex hormones—have made some advances which are encouraging—as much as 50 percent of the Huggins cases have been improved, which is indeed gratifying.

An advance has been observed in intra-arterial therapy, with certain chemical compounds. In our own laboratory in San Francisco one of the investigators has used nitrogen mustard—the old mustard gas in chemical composition. There is nothing new about the use of this compound, but the new part is that it is introduced intra-arterially and thereby taken directly to the part affected.

For instance, in Hodgkins disease, which is cancer involving the lymph glands, there has always been a problem in getting at the disease where it has invaded the liver. The giving of nitrogen mustard

by other methods, either by mouth or intravenously, has effected some improvement in the individual and in the glands throughout the body, but so far with these methods it has not been possible to have it reach the liver.

One of our investigators has been able, through the application of knowledge of catheterization of blood vessels, usually going in through the artery in the neck or one of the arm arteries, to introduce a catheter into the liver vessels and deliver nitrogen mustard directly to the nodules of cancer.

While this procedure is in its early stages, it offers promise and is distinctly an advance which, of course, is paired with the advances we see in the heart field, where catheterizations are performed usually for diagnostic purposes. A microflurometric scanner has been developed.

ACCOMPLISHMENTS IN CANCER DIAGNOSIS

That long name means that through a fluorometric device, under the microscope, an examination of tissue can be made which enables the operator, when a cancer cell is encountered, to know that it is a cancer cell by the difference of intensity of light as measured with this apparatus. This apparatus has been developed from funds from one of the grants which were made to the Memorial Hospital in New York. This procedure is useful in the improvement of diagnostic methods of cancer.

A similar advance generally has been made in the approach to diagnosis of cancer through the so-called cytologic diagnosis of body fluids. The one we hear the most about is diagnosis of cancer of the cervix and of the uterus.

Some splendid work has been accomplished in the diagnostic field. The principle of cytologic diagnosis is that of taking smears from the fluids of the various tissues and examining them under a microscope after proper staining and determining the presence or absence of cancer cells.

The application of this procedure subsequently to secretions from the lung consists of using a bronchoscope, gathering material and looking at it. The examination of prostatic fluid consists of examining material from a prostate which might have cancer and searching for cancer cells.

Perhaps the most spectacular approach is the cytologic diagnosis of stomach cancer which so far in the hands of experts has given a rather high yield. This approach is through the use of a balloon made out of rough fabric. The individual swallows it. The balloon gets into the stomach, is inflated, and gently rotated. Some of the cells of the stomach lining or cancer adhere to the rough service of the balloon. It is deflated, brought up, washed, and the cells stained in accordance with the technique of the cytologic approach. A diagnosis of cancer of the stomach frequently can be made through this means.

At the time in the hands of Dr. Papanicolau who is the author with Dr. Traut of the so-called cytologic diagnosis of cancer. The method has yielded as high as 90 percent diagnostic correlation when a known cancer of the stomach exists.

There are a number of other advances in the diagnostic field. I have mentioned but a few. There are others which one could dwell upon but the foregoing appear to me to be the most important.

Right here in Washington at George Washington Medical School, one of the investigators, Dr. Calvin Klopp who has been working with a grant from us, has performed some very nice work and had some good results with the use of nitrogen mustard intraarterially, but with the addition of almost lethal doses of aureomycin, an antibiotic with which you are perhaps familiar.

This doubling of treatment seems to be very effective in some instances of cancer, particularly of cancer of the pelvis.

So far, in a small series of cases, Dr. Klopp has had some very encouraging results. Most of these cases are so-called moribund cases, that is, those about to die. It is difficult to assess the value of this until we have a much larger series.

DEVELOPMENTS IN RADIATION RESEARCH

An advance has been made in the field of radiation from the research viewpoint, which I think is of significance, Mr. Chairman. Much interest has been engendered in the last few years in the use of so-called multimillion-volt machines, which deliver X-rays—the conventional X-rays with which you are familiar—in a beam which can reach deeper-seated cancers.

The development of these machines has been quite a problem and some of the investigators, with funds from the National Cancer Institute, and other granting agencies, have now arrived at a situation in which several machines, notably in the 2-million-volt range, and strangely enough, a 22-million-volt range, have been found to have effectiveness in the treatment of some cancers, over and above that observed from the use of ordinary therapy machines.

Similarly, cobalt-60, which is one of the radio-active isotopes of cobalt, has been developed at Oak Ridge. The latest work however has been done in the Canadian atomic pile at Chalk River and has resulted in the preparation of sizable amounts of so-called cobalt-60, to make a bomb to be used in the treatment of cancer. Two or three of these treatment bombs are now being established in different part of the country. The largest one, I believe, will be at the M. D. Anderson Hospital in Houston, Tex.

This cobalt-60 emits essentially the same sort of rays that X-ray does. It apparently has the advantage of being not only cheaper but is more easily handled and it would appear from what my expert friends advise me, that cobalt-60 will supplant radium, if advancement continues.

All of this might come under the term of developmental research or instrumentation, but must have a broad approach on all fronts in order to achieve a rounded approach to the management of cancer.

In what we call the control field, I think some distinct advances have occurred.

DECREASED CANCER DEATH-RATE FOR WOMEN

In our better medical centers throughout the country, the mortality of cancer in women has decreased about 25 percent in the last 20 years. Throughout the country generally, mortality in women from cancer has decreased about 10 percent. In men, the improvement in death rates has not been quite as heartening. The difference is due primarily to the accessibility of sites of cancer. Cancer of the stomach has a grim outlook, and occurs much more frequently in men than in women. In women, the breast, the cervix and the body of the uterus are the most common sites and these are comparatively accessible sites. One can see them, take pictures of them, and feel them. Whereas in men, with cancer of the stomach, cancer of the lung and cancer of the prostate, we frequently do not know that cancer is present until it is pretty far along. We cannot visualize such cancers as easily as they can be visualized in women.

INCREASE OF LUNG CANCERS

There seems to be, incidentally, an actual increase in the amount of lung cancer occurring. That is, as far as the experts are able to ascertain, and about the only cancer in which there seems to be an actual increase. It is true there are more cancers occurring these days, and there is a greater number of deaths, because there are more of us. Individuals are saved from communicable diseases and other conditions and as they grow older die probably from heart disease or cancer.

IMPROVED TEACHING PROGRAM FOR MEDICAL STUDENTS

There has been a distinct improvement in the caliber of teaching of cancer in medical schools. This is an advance which may not be as dramatic and as apparent as some others, but certainly we know that students and undergraduates in medical schools are now getting a better preparation for the management of cancer than they ever did before.

REFRESHER COURSE TRAINING PROGRAM FOR PHYSICIANS

At the same time we have been working with State and local health departments, and working with the voluntary agencies in the field—primarily the American Cancer Society—we have been able to project refresher courses for physicians; have been able to arrange training for physicians, and to have some sort of program whereby physicians during their entire professional career can obtain the latest information about cancer, its diagnosis, management, and prevention.

As far as training is concerned, Mr. Chairman, to date, with funds which have been made available over a period now of about 6 years by the Congress, 344 physicians have completed their training. This is in addition to the 105 who are now in training, and have gone back to their communities and are practicing better medicine.

Mr. FOGARTY. What do you mean by that "training"?

Dr. HELLER. That is training in surgery, medicine, radiology, pathology, or in those specialties which are particularly important either to the diagnosis or management of cancer. These physicians go to

hospitals of their choice, obtain training and go back to their regular practice.

About 90 percent of those 344 physicians we contacted, 2 years ago are devoting a substantial amount of their time to the cancer clinics in their neighborhood or their health department or other cancer activity and thereby are contributing and returning to the program their skills, which is indeed gratifying. This has been a successful program.

FELLOWSHIP PROGRAM

At the same time, the fellowship program has been projected and to date 528 men have been trained. This is in addition to the 165 or 170 who are now in training. These men have gone out and many are doing research in cancer; if not in cancer, they are doing research in the medical field generally, and have contributed to the improvement in research. Since some of the latter are medical men as well, again they contribute to the management of cancer. We consider this to be a very worth while advance or contribution.

PROGRAM OF CANCER EDUCATION FOR LAYMEN

The provision of certain aids, notably films for the education of people, I think has been an extremely successful development.

One film is Self-Examination for Breast Cancer, which I believe has been the finest teaching film in medical literature, or at least it is one of the most successful.

To date, over 1,200 prints have been sold.

As a result of this film, I do not know how many women, but numerous women—we hope sometime to have a tabulation—have gone to their private physicians with a lump in their breasts which subsequently was determined to be cancer and had the advantage of early diagnosis and removal, thereby saving their lives.

That is one of the most dramatic things I think that has been happening in the cancer field.

Mr. Chairman, there are many other advantages which could be discussed, but I have attempted merely to pick out a few at random which I thought would interest you, and to indicate that we believe this program is proceeding along very well. We are certainly gratified at the support which this committee has always given us.

Mr. FOGARTY. Thank you, Doctor.

EXPLANATION OF BUDGET ESTIMATE

Your appropriation for 1952 was $19 million?

Dr. HELLER. $19,500,000.

Mr. FOGARTY. And you are asking $15,371,000. That shows a reduction of $4,129,000. What is that reduction?

Dr. HELLER. That reduction, sir, is—the difference is the completion of the liquidation by cash of previous obligations for construction grants.

That liquidation is completed during this current fiscal year, and since this program is no longer in existence, will complete the obligation of the Government for construction grants.

Mr. FOGARTY. There is no money in here for liquidation of contract authority in the coming fiscal year?

Dr. HELLER. There are no funds for that purpose.

AMOUNT OF 1952 SUPPLEMENTAL BUDGET ESTIMATE

Mr. FOGARTY. Now you anticipate a supplemental of $200,000 for the pay increases for 1952?

Dr. HELLER. That is correct.

ESTIMATED COST OF PAY ACT INCREASE

Mr. FOGARTY. What do you anticipate the entire cost of the pay increases to be in 1952?

Dr. HELLER. $273,000, sir.

Mr. FOGARTY. So you are absorbing $73,000?

Dr. HELLER. That is correct, sir.

EXPLANATION OF 1952 TRANSFER OF FUNDS

Mr. FOGARTY. What is this $24,000 transfer?

Mr. HARLOW. That is a part of our supplementation of the fund provided by Congress for the claimant agency activities of the Federal Security Agency.

Mr. FOGARTY. What is this $45,000 transfer?

Mr. HARLOW. That is the proposed consolidation of the basic regional office staffs of the Public Health Service.

Mr. FOGARTY. What is this $4,625,000?

Mr. HARLOW. That is the amount of the 1952 appropriation applied to liquidate contract authorizations.

AMOUNT OF NET BUDGET INCREASE

Mr. FOGARTY. Now without the contract authority, you estimate the availability of $15,006,000, for 1952. You are asking for $15,371,000 for 1953 or an increase of $365,000.

Dr. HELLER. That is correct, sir.

ESTIMATES FOR GRANTS

Mr. FOGARTY. In your grants for research projects, there is no change. No change in research fellowships. No change in teaching of medical subjects. No change in training stipends. No change for the detection, and other control services, but for special control projects you show a decrease of $150,000. What is that?

Dr. HELLER. Those are the projects made to States and other institutions primarily to help in the studies of diagnosis of cancer, morbidity studies and certain other studies, particularly those having to do with environmental cancer.

In order to keep within our budgetary ceiling, it was deemed, with a great deal of difficulty, that we could take a reduction at this point.

EXPLANATION OF INCREASE FOR DIRECT OPERATIONS RESEARCH

Mr. FOGARTY. In direct operations for research, you ask for an increase of $563,000, and 52 positions?

Dr. HELLER. Yes, sir.

Mr. FOGARTY. What is the reason for that?

Dr. HELLER. That, Mr. Chairman, is the clincal center operations. The 52 positions indicated are both professional and supporting positions, all for the clinical center operations.

That is also for the care of patients and is a part of the general approach to the clinical center which may have been referred to earlier.

Dr. TOPPING. You will recall in Dr. Sebrell's testimony he said there were variations throughout the institute appropriations because we intended to handle the patient care, feeding and nursing services centrally, as we now handle many of our things in the National Institutes of Health. But the money appearing, as this committee requested of him years ago, in the specific category of one of the Institutes, so you can always know what the appropriations were for, cancer or for heart. Then it is made as a reimbursable item to the National Institutes of Health to finance one of the facilities, depending on the usage that the specific appropriation puts upon the central service and the demand it puts upon the central service.

NEW POSITION COMPLEMENT TO STAFF CLINICAL CENTER

Mr. FOGARTY. I attempted to get Dr. Sebrell to tell us earlier today how many he expected to employ at the new building in Bethesda. As I understand it, he was talking about a different group, and there will be 52 additional positions under the Cancer Institute that are going to work in the clinical center?

Dr. TOPPING. That is correct, sir.

In the list of new positions in the National Institutes of Health you will find two sorts of people, one having to do with the care of the patient, the nursing services, and so forth.

Then, in the National Institutes of Health you will find a small number in the Microbiological Institute, in the Arthritis Institute, in the Neurological Institute, who will be doing clinical research.

In this appropriation there are two kinds of people, also. One kind you have seen already in the consolidated tables for the hospital operation. This is a reimbursable item. On top of that, 52 people are being requested in this budget for the clinical investigation, the laboratory attendants, and so forth, for direct operations by the Cancer Institute in their clinical investigation of cancer.

Mr. FOGARTY. In other words, you are not asking for any increase in the Cancer Institute except to help staff the clinical center at Bathesda?

Dr. TOPPING. In each of the institute appropriations you will see a number something like this. Some part of this total sum that is indicated here will be transferred for the central services; a smaller part of it will remain in the Cancer Institute to carry out their clinical investigation on the patients who are being taken care of by the central funds.

Mr. FOGARTY. Will you put into the record a breakdown of these positions, and also put into the record what you anticipate the increase will be for 1954?

Dr. HELLER. All right, sir.

(The information requested is as follows:)

Breakdown of new positions, 1953

Title	Grade	Positions	Net amount
Medical officer	GS-15	2	$20,520
Medical officer	GS-13	1	4,930
Scientist	GS-13	2	7,520
Medical officer	GS-13	1	4,930
Scientist	GS-13	2	7,520
Medical officer	GS-11	1	1,190
Scientist	GS-11	2	5,350
Scientist	GS-9	4	5,060
Supporting technical staff	GS-2 through GS-7	28	13,695
Grades established by act of July 1, 1944 (42 U. S. C. 207):			
Surgeon	Director	3	28,941
Surgeon	Senior	2	15,184
Visiting scientist	Ungraded	2	7,000
Total		52	127,000

NOTE.—Projected costs of these projects in 1954 are estimated at 96 positions and $445,000, after allowing a lapse of approximately 25 percent on new positions. These figures exclude costs of patient care and supporting research services reflected in the clinical center table for "Operating expenses, National Institutes of Health."

METHODS USED TO DETECT STOMACH AND LUNG CANCERS

Mr. FOGARTY. Now, suppose I went to the naval hospital in Bethesda for a physical examination. There still is not any way of detecting stomach cancer if I should have it in the early stages, or cancer of the lung if I have it in the early stages, is there?

Dr. HELLER. Yes, sir, Mr. Chairman, if one looks for it. The great difficulty is that usually unless one suspects it for one reason or another, as in coughing in the case of the lung or pain in the case of the stomach, usually one does not look for cancer unless a chest X-ray is taken for some purpose and a lesion is revealed.

Similarly, cancer of the stomach can be found if one is looking for it. You may recall the work Dr. Russell Morgan has been doing at Johns Hopkins which we have been supporting.

Mr. FOGARTY. Is that some sort of a machine?

Dr. HELLER. Yes, sir. That is an X-ray fluoroscope which has a very fine camera attached to it to take pictures of the stomach of an individual after he has taken barium, which is opaque to X-rays. The patient is rotated in a 360-degree circle and at various places in this circle, X-rays are taken to show every portion of the stomach. It is possible to detect through that method even a tiny lesion which may be as small as two or three millimeters, which is perhaps the width of two or three pin heads.

If the X-ray shows some abnormality it would not necessarily be a cancer, but at least it gives one an indication to examine the patient further.

Subsequently, additional X-ray examinations can be made and then an actual investigation made through introduction of a stomach tube to view the stomach and take pictures, and finally introduce a balloon, as I described previously, to see if cells can be obtained and attempt to establish a diagnosis of cancer.

So to answer your question completely, Mr. Chairman, I would say it is possible to detect cancer early if one makes the necessary examinations.

IMAGE AMPLIFICATION RESEARCH

Mr. FOGARTY. Is there any other camera similar to that one being used in Johns Hopkins available in any other section of the country?

Dr. HELLER. Yes, sir; at Chicago a study is going on, and in San Francisco I believe someone is also working with it. It is the so-called Schmidt camera and is tied up with developmental research in which it has been necessary to reduce the amount of radiation the person gets through the fluoroscope and increase the intensity of the image. The technical name of the research is "image amplification."

It is possible to take all these pictures and not injure the person by giving him a lot of radiation. It is an interdigitation of three or four research approaches.

Mr. FOGARTY. How long does it take?

Dr. HELLER. It takes just a matter of minutes.

Mr. FOGARTY. Is it expensive?

Dr. HELLER. I believe the latest information I had from Dr. Morgan was that to do a complete examination of the person would cost about $6.

Now, obviously on a mass basis the cost could be reduced.

At Hopkins, for instance, every patient above 35 coming through the dispensary receives this examination.

Mr. FOGARTY. Is that examination just one of the stomach?

Dr. HELLER. An examination of the stomach and lower duodenum and the lower part of the esophagus, which is the tube from the mouth to the stomach. It will outline any pathology that happens to be in that area.

It can be carried out also, Mr. Chairman, to other parts of the body if they happen to focus on them, but for this particular purpose swallowing the barium to outline the stomach is the one with which we are most concerned.

PHYSICIAN ALERTNESS TO POSSIBLE CANCER CASES

Mr. FOGARTY. Suppose I go to my own personal physician at home and tell him I want a complete, thorough, physical examination. Would the average physician look for cancer when giving anyone a physical examination?

Dr. HELLER. I think he would, Mr. Fogarty. I believe the average good private physician is alert and sensitive to the possible presence of cancer. In many instances I know he does not have access to some of the facilities that may exist in some of the medical centers.

Usually if he has any reason to suspect the presence of a tumor, or simply on a routine basis desires to have an examination, he can refer his patient to an X-ray clinic, or to a medical center for examination of this type—for lung and stomach examinations in particular. Those are usually not available in the average physician's private office. That does not mean it is impossible to pick up a lung cancer through the usual X-ray examination. It is. A good man can pick up a very small cancer in the chest. He may not know that it is a cancer. He knows that it is something not normal in the chest and will cause him

to look into it further and establish the fact that it is cancer or is not. If it is a healed tubercular nodule, or whatever, he is alerted to the fact that it is something not normal.

Mr. FOGARTY. In the case of early discovery, is there any chance of eliminating the cancer in the stomach or the lung?

Dr. HELLER. Yes, sir. While the outlook has not been too good in both sites, it has improved steadily.

In the hands of the best men like Dr. Ochsner, of New Orleans and Dr. Davis, in Washington, and other men throughout the country, the outlook is improving. They know better how to prepare the patient for operation; how to take care of him after the surgery.

We know of a number of instances where a life was saved by this surgery, so the outlook is very good, if one gets it early enough.

Mr. FOGARTY. If it is early enough and the lung is removed, does that mean the cancer has been removed?

Dr. HELLER. That is correct, sir, if it is early enough.

Sometimes if the cancer has been there for some time and has spread to other parts of the body—frequently the spine, the lungs, the liver, or some other portion of the body, what we call metastasis, the outlook is not too good. The removal of the original cancer will allow the patient to live very comfortably for several years with the improved management of cancer which we now enjoy.

TEACHING GRANTS TO MEDICAL SCHOOLS

Mr. FOGARTY. Does your estimate for 1953 contemplate giving a grant for teaching to the 81-year medical schools in the country?

Dr. HELLER. That is correct, Mr. Chairman.

Mr. FOGARTY. What did you give them this year?

Dr. HELLER. The maximum was $25,000 to the 4-year medical schools, $5,000 to the 2-year medical schools, and $5,000 to the dental schools, and a maximum of $25,000 to six osteopathic schools.

Mr. FOGARTY. Did they receive the same amount in 1951 as they received in 1952?

Dr. HELLER. Yes, sir.

Mr. FOGARTY. Those are teaching grants, is that right?

Dr. HELLER. Yes, sir.

Mr. FOGARTY. Has there ever been any controversy over grants to these schools from any other organizations, especially medical organizations?

Dr. HELLER. No, sir; we have not encountered any, Mr. Chairman. If there has been any controversy, it has been over a minor point with a particular school.

As a matter of fact, that has been a very successful program. The AMA and the Association of American Medical Colleges have endorsed this program and have received it enthusiastically.

Mr. FOGARTY. This is in the form of aid to medical schools, is it not?

Dr. HELLER. Well, in the ultimate it would be that, Mr. Chairman. It was primarily for a specific purpose, but in effect it improves the general teaching in a medical school by improving a particular facet of the medical curriculum.

Mr. FOGARTY. What qualifications does a school have to have in order to get such a grant?

Dr. HELLER. An accepted medical school—one which meets the standards of the Association of Medical Colleges, presents an acceptable program by way of a budget and a plan which is reviewed by us. This plan is presented to our council for recommendation. The council makes its recommendation and the Surgeon General makes the award upon that basis.

Mr. FOGARTY. Are there any strings attached to this grant to the schools?

Dr. HELLER. No, sir; except that they adhere in general to the plan which they originally indicated, and that the grant be used in general for the improvement of the teaching of cancer.

Mr. FOGARTY. That is about the only strings that you have on it, to make sure that it is being spent for that specific purpose.

Dr. HELLER. And in accordance with the usual Federal budgetary practices.

GRANTS FOR RESEARCH

Mr. FOGARTY. You have $3,100,000 for grants for research and training?

Dr. HELLER. Yes, sir.

GRANTS FOR RESEARCH FELLOWSHIPS

Mr. FOGARTY. Now, "Research felowships, $500,000." Will you put into the record the number of fellowships that you gave in 1952 and which you anticipate in 1953?

Dr. HELLER. Yes, sir.

Mr. FOGARTY. Also the membership of the board that passes on them.

Dr. HELLER. Yes, sir.

(The information requested is as follows:)

One hundred and seventy fellows in 1952, same number in 1953.

NATIONAL CANCER INSTITUTE REVIEW BOARD ON RESEARCH FELLOWSHIP GRANTS

Dr. H. W. Chalkley, Assistant Chief, Grants and Fellowships Branch.
Dr. J. Hartwell, Head of Organic Chemistry Section, Laboratory of Chemical Pharmacology.
Dr. R. Hertz, Chief of Endocrinology Section.
Dr. G. H. Hogeboom, Head of Cell Chemistry Unit, Biology Section.
Dr. E. Lorenz, Chief, Laboratory of Biophysics.
Dr. A. Meister, Chief of Section on Clinical Biochemical Research, Laboratory of Biochemistry.
Dr. H. L. Stewart, Chief, Pathology Section.
Dr. J. White, Head, Section on Metabolism, Laboratory of Biophysics.

PURPOSE OF TRAINING STIPENDS

Mr. FOGARTY. What do you mean by training stipends?

Dr. HELLER. Those, Mr. Chairman, are the funds for physicians to enable them to go to the institutions of their choice, perfect themselves in the techniques and methods.

PHYSICIANS RECEIVING TRAINING STIPENDS

Mr. FOGARTY. Will you give us a list of these physicians?

Dr. HELLER. Yes, sir.

(The information requested is as follows:)

LIST OF CURRENT TRAINEES NATIONAL CANCER INSTITUTE

(By State)

Dr. Carl E. Wenger, University of Arkansas School of Medicine, Little Rock, Ark.
Dr. George L. Alexander, University of California Hospital, department of radiology, San Francisco 22, Calif.
Dr. Wayne A. Chesledon, University of California Hospital, department of radiology, San Francisco 22, Calif.
Dr. Jesselene H. Thomas, San Francisco Hospital, Twenty-second and Potrero Streets, San Francisco 10, Calif.
Dr. Robert M. Squire, Stanford University School of Medicine, department of radiology, San Francisco 22, Calif.
Dr. Jesselene H. Thomas, San Francisco Hospital, Twenty-second and Petrero Streets, San Francisco 10, Calif.
Dr. Robert M. Squire, Standford University School of Medicine, department of radiology, Clay and Webster Streets, San Francisco 15, Calif.
Dr. Victor A. Marcial, Penrose Cancer Hospital, 2200 Cascade Avenue, Colorado Springs, Colo.
Dr. Bryan L. Redd, Penrose Cancer Hospital, 2200 Cascade Avenue, Colorado Springs, Colo.
Dr. Alfred Edwards, University of Colorado Medical Center, 4200 East Ninth Avenue, Denver 7, Colo.
Dr. Donald P. Shedd, Yale University School of Medicine, department of surgery, New Haven, Conn.
Dr. John W. Capps, Freedmen's Hospital, Washington 25, D. C.
Dr. George E. Blackman, Howard University School of Medicine, department of pathology, Washington 1, D. C.
Dr. Timothy L. Kelly, Georgetown University Hospital, 3800 Reservoir Road, Washington 7, D. C.
Dr. Mary J. Matthews, Georgetown University Hospital, Washington 7, D. C.
Dr. Jean Ann Wilfong, Georgetown University Hospital, Washington 7, D. C.
Dr. Joseph R. Barberio, Warwick Memorial Clinic, 1339 H. Street NW., Washington 5, D. C.
Dr. Paul F. Grice, Warwick Memorial Clinic, 1339 H. Street NW., Washington 5, D. C.
Dr. Thomas G. Fountain, Emory University Hospital, Emory University, Ga.
Dr. Cecil A. White, University of Georgia Medical School, Augusta Ga.
Dr. Leon Toby, Chicago Tumor Institute, 21 West Elm Street, Chicago 10, Ill.
Dr. Robert G. Morris, Jr., Provident Hospital, 426 East Fifty-first Street, Chicago 15, Ill.
Dr. Irwin Horwitz, University of Illinois, College of Medicine, 1853 West Polk Street, Chicago 12, Ill.
Dr. Vernon G. Smith, University of Kansas Medical Center, Kansas City 3, Kans.
Dr. Robert F. Long, Johns Hopkins Hospital, department of radiology, Baltimore 5, Md.
Dr. Merall Roth, Johns Hopkins Hospital, department of radiology, Baltimore 5, Md.
Dr. James K. V. Willson, Johns Hopkins Hospital, department of radiology, Baltimore 5, Md.
Dr. Anthony Zovickian, Johns Hopkins Hospital, department of plastic surgery, Baltimore 5, Md.
Dr. Gerardo B. Polanco, University of Maryland Hospital, department of pathology, Baltimore 1, Md.
Dr. Wilbur A. Thomas, Massachusetts General Hospital, Boston 14, Mass.
Dr. Klaus R. Dehlinger, Peter Bent Brigham Hospital, 721 Huntington Avenue, Boston 15, Mass.
Dr. Robert E. Desautels, Peter Bent Brigham Hospital, 721 Huntington Avenue, Boston 15, Mass.
Dr. George C. Branche, Tufts College Medical School, 30 Bennett Street, Boston 11, Mass.
Dr. Daniel C. Hunter, University of Michigan Hospital, Ann Arbor, Mich.
Dr. John R. Pennington, University of Michigan Hospital, Ann Arbor, Mich.
Dr. Thomas P. Nash, University of Michigan Hospital, Ann Arbor, Mich.

Dr. William J. Kenfield, Wayne County General Hospital, Eloise, Mich.
Dr. Gail G. L. Li, Detroit Receiving Hospital, 1326 Saint Antoine Street, Detr
26, Mich.
Dr. Joseph C. Tarantino, Mayo Foundation for Medical Education and Resear
Rochester, Minn.
Dr. Allen S. Judd, University of Minnesota Hospital, Minneapolis, Minn.
Dr. William D. Kelly, University of Minnesota Hospital, Minneapolis, Minn.
Dr. Edward E. Mason, University of Minnesota Hospital, Minneapolis, Minn.
Dr. Ned D. Rodes, Ellis Fischel State Cancer Hospital, Columbia, Mo.
Dr. George L. Watkins, Ellis Fischel State Cancer Hospital, Columbia, Mo.
Dr. Emmett J. Conrad, Homer G. Phillips Hospital, St. Louis, Mo.
Dr. Armand Brodeur, St. Louis University School of Medicine, 1402 South Gra
Boulevard, St. Louis 10, Mo.
Dr. John J. McGahan, St. Louis University School of Medicine, 1402 South Gra
Boulevard, St. Louis 10, Mo.
Dr. Martin Bergmann, Barnes Hospital, 600 South Kingshighway, St. Lou
10, Mo.
Dr. Elrie P. Rodgers, Washington University School of Medicine, Euclid Av
and Kingshighway, St. Louis 10, Mo.
Dr. John B. Shapleigh, Washington University School of Medicine, Euclid Av
nue and Kingshighway, St. Louis 10, Mo.
Dr. William J. Natoli, Bernard Free Skin and Cancer Hospital, St. Louis 3, M
Dr. Richard M. Friedenberg, Bellevue Hospital, Twenty-sixth Street and Fir
Avenue, New York 16, N. Y.
Dr. Walter E. Longshore, Bellevue Hospital, Twenty-sixth Street and Fir
Avenue, New York 16, N. Y.
Dr. Alex Norman, Bellevue Hospital, Twenty-sixth Street and First Avenu
New York 16, N. Y.
Dr. Nathan Lane, Columbia-Presbyterian Hospital, 622 West One Hundred an
sixty-eighth Street, New York 32, N. Y.
Dr. Hugh F. Luddecke, Columbia-Presbyterian Hospital, 622 West One Hundr
and Sixty-eighth Street, New York 32, N. Y.
Dr. Hugh S. Totten, Columbia-Presbyterian Hospital, 622 West One Hundr
and Sixty-eighth Street, New York 32, N. Y.
Dr. Haig S. Aijian, Memorial Hospital, 444 East Sixty-eighth Street, New Yo
21, N. Y.
Dr. Grover H. Batten, Memorial Hospital, 444 East Sixty-eighth Street New Yo
21, N. Y.
Dr. Richard D. Brasfield, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. Warren F. Eberhart, Memorial Hospital, 444 East Sixty-eighth Stree
New York 21, N. Y.
Dr. William H. Fairweather, Memorial Hospital, 444 East Sixty-eighth Stree
New York 21, N. Y.
Dr. Hollon W. Farr, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. Eugene W. Friedman, Memorial Hospital, 444 East Sixty-eighth Stree
New York 21, N. Y.
Dr. David M. Gerber, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. James H. Holman, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. Alfred A. Luhr, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. Charles J. McPeak, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. William A. Maddox, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. Condict Moore, Memorial Hospital, 444 East Sixty-eighth Street, New Yor
21, N. Y.
Dr. Stuart H. Q. Quan, Memorial Hospital, 444 East Sixty-eighth Street, Ne
York 21, N. Y.
Dr. William P. Rogers, Memorial Hospital, 444 East Sixty-eighth Street, New
York 21, N. Y.
Dr. Frederick Wetherell, Memorial Hospital, 444 East Sixty-eighth Street,
New York 21, N. Y.

Dr. Austin D. Johnston, Montefiore Hospital, Gun Hill Road, New York 67, N. Y.
Dr. Isaac Lewin, Montefiore Hospital, Gun Hill Road, New York 67, N. Y.
Dr. Julian E. Abrams, Mount Sinai Hospital, Fifth Avenue and One Hundredth Street, New York 29, N. Y.
Dr. John J. Gill, New York Medical College, 1 East One Hundred and Fifth Street, New York 29, N. Y.
Dr. Edward J. Nightingale, New York Medical College, 1 East One Hundred and Fifth Street, New York 29, N. Y.
Dr. Charles D. Sherman, University of Rochester, School of Medicine, Rochester 7, N. Y.
Dr. Thomas R. Broadbent, Duke University Hospital, Durham, N. C.
Dr. Nicholas G. Georgiade, Duke University Hospital, Durham, N. C.
Dr. Aubrey T. Hornsby, Duke University Hospital, Durham, N. C.
Dr. Robert L. Pinck, University of Lausanne, Lausanne, Switzerland.
Dr. W. Ralph Deaton, North Carolina Baptist Hospital, Winston-Salem 7, N. C.
Dr. Elmer E. Pautler, North Carolina Baptist Hospital, Winston-Salem 7, N. C.
Dr. Robert P. Carson, Cincinnati General Hospital, Cincinnati, Ohio.
Dr. Russell Weisman, Western Reserve University, School of Medicine, Cleveland 6, Ohio.
Dr. C. Jules Rominger, American Oncologic Hospital, Powelton Avenue at Thirty-third Street, Philadelphia 4, Pa.
Dr. James M. Judd, Jefferson Medical College, 1025 Walnut Street, Philadelphia, Pa.
Dr. Edgar S. Childs, Pennsylvania Graduate Hospital, Philadelphia 4, Pa.
Dr. Ernest L. Wooten, Pennsylvania Graduate Hospital, Philadelphia 4, Pa.
Dr. Paul T. Carrigan, Pennsylvania Hospital, Eighth and Spruce Streets, Philadelphia 7, Pa.
Dr. Henry C. Blount, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. William C. Owsley, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. Antolin Raventos, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. Alan J. Rubin, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. Richard V. Wilson, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. Norman Winston, Pennsylvania University Hospital, Philadelphia 4, Pa.
Dr. Robert W. Alexander, Philadelphia General Hospital, Thirty-fourth Street and Curie Avenue, Philadelphia 4, Pa.
Dr. Robert J. Faulconer, Presbyterian Hospital, Philadelphia 4, Pa.
Dr. James H. Bushart, University of Tennessee, College of Medicine, 847 Union Avenue, Memphis 3, Tenn.
Dr. Robert E. Dillman, University of Tennessee, College of Medicine, 847 Union Avenue, Memphis 3, Tenn.
Dr. Marga H. Sinclair, M. D. Anderson Hospital, 2310 Baldwin Street, Houston, Tex.
Dr. Edward K. Carter, Medical College of Virginia, Richmond, Va.
Dr. John C. Evans, Tumor Institute of Swedish Hospital, 1211 Marion Street, Seattle, Wash.

Mr. FOGARTY. You told us in your statement how many have taken advantage of this program in the last 5 or 6 years. How many was that?

Dr. HELLER. 344.

Mr. FOGARTY. They are now back in their own local communities practicing or working with the clinical centers?

Dr. HELLER. Yes, sir.

EXPLANATION OF GRANTS FOR DETECTION, DIAGNOSIS, AND OTHER CONTROL SERVICES

Mr. FOGARTY. Now, the $3,100,000 for grants for detection and diagnosis and other control services. What do you mean by that?

Dr. HELLER. That is the item of the grants to States.

GRANTS FOR RESEARCH PROJECTS

Mr. FOGARTY. Would you explain how this differs from the item for "Research projects" that we just touched on a minute ago?

Dr. HELLER. Those are grants to medical schools, research institutions and individuals throughout the country for individual projects of research.

STATISTICAL INFORMATION REGARDING GRANTS

Mr. FOGARTY. For the record, will you give us a breakdown of that by school and the membership of the board that passes on these projects?

Dr. HELLER. Yes, sir.

(The information requested is as follows:)

NATIONAL ADVISORY CANCER COUNCIL

Mr. James S. Adams, 44 Wall Street, New York, N. Y. (term expires 1953).
Dr. Joseph C. Aub, Harvard University, Boston, Mass. (term expires 1955).
Dr. W. Edward Chamberlain, Temple University Hospital, Philadelphia, Pa. (term expires 1955).
Prof. E. A. Doisy, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis 4, Mo. (term expires 1952).
Prof. W. U. Gardner, department of anatomy, Yale University School of Medicine, 333 Cedar Street, New Haven 11, Conn. (term expires 1954).
Mr. Maurice Goldblatt, 333 South State Street, Chicago 4, Ill. (term expires 1954).
Mr. Herbert A. May, Post Office Box 1604, Pittsburgh, Pa. (term expires 1952).
Mrs. Lois Mattox Miller, 1088 Park Avenue, New York, N. Y. (term expires 1953).
Dr. John J. Morton, department of surgery, University of Rochester Medical School (term expires 1954).
Mrs. R. E. Mosiman, 2686 Magnolia Drive, Seattle, Wash. (term expires 1952).
Dr. Paul E. Steiner, professor of pathology, University of Chicago, Chicago 37, Ill. (term expires 1953).
Mr. Hugh G. Payne, 921 Oakdale Drive, Oklahoma City, Okla. (term expires 1955).

EX OFFICIO MEMBERS

Dr. G. R. Callender, Chief, Pathology Division, Veterans' Administration, Washington 25, D. C. Alternate for Vice Adm. Joel T. Boone, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington 25, D. C.
Brig. Gen. Elbert DeCoursey, MC, Armed Forces Institute of Pathology, Room 112, Seventh Street and Independence Avenue SW., Washington 25, D. C. Alternate for Dr. W. Randolph Lovelace II, Chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington, D. C.
Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.

National Cancer Institute Research grants approved for payment from fiscal year 1951 funds, by State and institution

	Number	Amount
Grand total	[1] 336	$3,392,590
Alabama	2	32,808
Southern Research Institute	1	20,808
Alabama Polytechnical Institute	1	12,000
California	33	365,940
University of California, Berkeley	9	161,398
University of California at Los Angeles	4	34,601
University of Southern California	3	19,678
Stanford University	9	65,197
California Institute of Technology	4	45,528
Laboratory for Research on Treatment of Cancer	1	4,900
Santa Barbara Cottage Hospital	1	10,888
Rees-Stealey Medical Research Foundation	1	5,000
Los Angeles County Hospital	1	18,750
Colorado: University of Colorado	1	9,990
Connecticut	12	72,972
Connecticut College	1	8,000
Yale University	11	64,972
District of Columbia	14	138,416
Carnegie Institution of Washington	1	6,975
Georgetown University	3	19,214
George Washington University, Warwick Clinic	6	43,725
Howard University	1	4,914
National Academy of Sciences	3	63,588
Florida: University of Florida	4	37,900
Georgia: University of Georgia	1	6,930
Illinois	35	308,307
Carle Hospital Clinic	2	10,260
University of Chicago	11	89,698
University of Illinois	11	107,967
Michael Reese Hospital	1	12,000
Northwestern University	5	55,374
Chicago Medical Schools	2	18,068
Illinois Institute of Technology	1	5,940
University of Southern Illinois	1	5,000
Individual grants	1	4,000
Indiana	5	30,598
University of Indiana	4	29,098
University of Notre Dame	1	1,500
Kansas: University of Kansas	2	16,291
Louisiana: Tulane University	1	9,990
Maine: R. B. Jackson Memorial Laboratory	3	51,092
Maryland	11	140,984
Johns Hopkins University	9	127,646
University of Maryland	1	10,763
Goucher College	1	2,575
Massachusetts	33	$376,769
Boston University	2	22,058
Children's Medical Cneter	1	30,000
Harvard University	10	116,574
Massachusetts General Hospital	5	25,080
Massachusetts Institute of Technology	2	35,600
New England Deaconess Hospital	1	13,781
New England Medical Center	2	19,094
Worcester Foundation	1	41,110
Tufts College	5	47,483
Wellesley College	1	4,866
Smith College	1	9,390
Pondville Hospital	1	8,350
Mount Holyoke College	1	3,383
Michigan	8	55,514
Michigan State College	1	10,616
University of Michigan	6	38,898
Detroit Institute of Cancer Research	1	6,000
Minnesota: University of Minnesota	8	127,139
Missouri	13	104,152
Midwest Research Institute	3	35,316
University of Missouri	2	11,725
St. Louis University	2	8,559
Washington University	6	48,552
New Jersey: Rutgers University	2	21,000
New York	63	678,077
Union College and University	3	21,319
Mary Imogene Bassett Hospital	1	2,376
University of Buffalo	1	7,000
New York Zoological Society	1	23,940
Hickrill Chemical Research Foundation	1	10,000
Columbia University	7	37,909
Cornell University	5	44,566
Maimonides Hospital	1	4,000
Fordham University	3	15,508
State University of New York	1	5,076
Memorial Hospital for Treatment of Cancer	15	327,683
Montefiore Hospital	4	54,691
Mount Sinai Hospital	4	18,106
New York University	3	21,070
University of Rochester	7	58,494
Harlem Hospital	1	466
Polytechnic Institute of Brooklyn	1	7,387
Barnard College	1	486
Brooklyn College	2	10,600
American Museum of Natural History	1	7,400
North Carolina: Duke University	2	21,000
Ohio	9	159,360
University of Cincinnati	2	13,883
Committee on research development, NBP	1	98,397
Ohio State University	5	40,080
Western Reserve University	1	7,000

[1] These grants are distributed among 114 institutions in 30 States, District of Columbia, 1 Territory, and 5 foreign countries.

National Cancer Institute Research grants approved for payment from fiscal year 1951 funds, by State and institution—Continued

	Number	Amount
Oregon: University of Oregon	2	$16,849
Pennsylvania	31	303,901
Duquesne University	1	3,600
Jefferson Medical College	3	21,625
Institute for Cancer Research and Lankenau Hospital	11	127,566
Pennsylvania Hospital	1	21,245
Pennsylvania State College	1	5,056
University of Pennsylvania	10	105,249
Temple University	1	500
Wistar Institute of Anatomy and Biology	2	18,060
Immaculata College	1	1,000
Rhode Island: Brown University	2	15,524
South Carolina: South Carolina State Medical College	2	18,650
Tennessee: University of Tennessee	1	7,632
Texas	2	6,735
University of Texas	1	1,850
Individual grants	1	4,885
Utah: University of Utah	4	32,888
Virginia	4	$21,424
Virginia Medical College	2	8,772
University of Virginia	2	12,652
Washington: University of Washington	5	68,963
Wisconsin: University of Wisconsin	8	59,283
Canada: McGill University	2	20,500
Puerto Rico: University of Puerto Rico	1	7,992
France	5	26,623
Pasteur Institute	2	24,833
Union Internationale Contre Le Cancer	2	1,250
University of Paris	1	540
Denmark	3	16,955
Carlsberg Foundation	1	540
University of Copenhagen	2	16,415
Switzerland: Eidgonessiche Technische Hochshule	1	540
Germany: Heidelberg	1	2,900

National Cancer Institute teaching grants approved for payment from fiscal year 1951 funds, by State and institution

State and institution	Number	Amount
Grand total	121	$2,062,647
Alabama: University of Alabama	2	29,968
Arkansas: University of Arkansas	1	24,991
California	6	104,968
University of California, Berkeley	2	29,968
College of Medical Evangelists	1	25,000
University of Southern California	2	30,000
Osteopathic Physicians and Surgeons College	1	20,000
Colorado: University of Colorado	1	25,000
Connecticut: Yale University	1	25,000
District of Columbia	6	91,500
Georgetown University	2	30,000
George Washington University	1	25,000
Howard University	3	36,500
Georgia	3	55,000
Emory University	2	30,000
University of Georgia	1	25,000
Illinois	8	$137,044
University of Chicago	1	23,652
University of Illinois	2	30,000
Loyola University	2	29,392
Northwestern University	2	29,000
Chicago Medical Schools	1	25,000
Indiana: University of Indiana	2	29,080
Iowa	3	54,876
State University of Iowa	2	29,876
Des Moines Still College of Osteopathy and Surgery	1	25,000
Kansas: University of Kansas	1	25,000
Kentucky: University of Louisville	2	30,000
Louisiana	3	55,000
Loyola University	1	5,000
Louisiana State University	1	25,000
Tulane University	1	25,000
Maryland	2	47,500
Johns Hopkins University	1	25,000
University of Maryland	1	22,500

...tional Cancer Institute teaching grants approved for payment from fiscal year 1951 funds, by State and institution—Continued

State and institution	Number	Amount
...ssachusetts	5	$85,000
Boston University	1	25,000
Harvard University	2	30,000
Tufts College	2	30,000
...higan	5	60,679
University of Michigan	2	25,736
Wayne University	1	24,943
University of Detroit	2	10,000
...nesota: University of Minnesota	2	30,000
...issippi: University of Mississippi	1	5,000
...souri	7	74,590
St. Louis University	3	35,000
Washington University	2	29,590
University of Kansas City	2	10,000
...raska	4	60,000
Creighton University	2	30,000
University of Nebraska	2	30,000
...w York	12	239,798
Union College and University	1	24,948
University of Buffalo	2	29,995
Columbia University	2	29,888
Cornell University	1	24,975
New York State University	2	50,000
New York Medical College	1	25,000
New York University	2	29,992
University of Rochester	1	25,000
...th Carolina	4	59,899
Duke University	1	24,899
University of North Carolina	2	10,000
Wake Forest Bowman-Gray Medical	1	25,000
...th Dakota: University of North Dakota	1	5,000
...	4	59,914
University of Cincinnati	1	25,000
Ohio State University	2	30,000
Western Reserve University	1	4,914
Oklahoma: University of Oklahoma	1	$25,000
Oregon: University of Oregon	2	29,981
Pennsylvania	9	164,770
Hahnemann Medical College and Hospital	1	24,800
Jefferson Medical College	1	25,000
University of Pennsylvania	2	29,970
University of Pittsburgh	2	30,000
Temple University	2	30,000
Woman's Medical College	1	25,000
South Carolina: South Carolina State Medical College	1	25,000
South Dakota: University of South Dakota	1	5,000
Tennessee	5	84,991
Meharry Medical College	2	30,000
University of Tennessee	2	29,991
Vanderbilt University	1	25,000
Texas	4	73,433
Baylor University	1	24,683
University of Texas	2	30,000
Southwestern Medical Foundation	1	18,750
Utah: University of Utah	1	25,000
Vermont: University of Vermont	1	24,845
Virginia	2	49,980
Virginia Medical College	1	25,000
University of Virginia	1	24,980
Washington: University of Washington	3	54,840
West Virginia: University of West Virginia	1	5,000
Wisconsin	3	55,000
Marquette University	2	30,000
University of Wisconsin	1	25,000
Puerto Rico: University of Puerto Rico	1	25,000

National Cancer Institute special control grants approved for payment from fis[cal] year 1951 funds

	Number	Amount
Grand total	66	$980,794
Alabama: University of Alabama	2	42,000
Arkansas: University of Arkansas	1	10,800
California	9	110,533
University of California, Berkeley	3	42,339
University of California at Los Angeles	2	26,039
California Department of Public Health	1	8,500
University of Southern California	2	28,676
Los Angeles County Hospital	1	4,979
Colorado	2	35,703
University of Colorado	1	17,928
Colorado State Department of Health	1	17,775
Connecticut	3	59,640
Yale University	2	34,968
Connecticut State Department of Health	1	24,672
District of Columbia	3	23,575
Georgetown University	2	13,575
National Academy of Science, National Research Council	1	10,000
Georgia: University of Georgia	3	25,603
Illinois	4	77,246
American College of Surgeons	2	59,264
University of Chicago	1	5,508
Northwestern University	1	12,474
Iowa: Iowa State Medical Society	1	20,000
Kansas: University of Kansas	1	27,635
Maryland: University of Maryland	1	6,264
Massachusetts	3	53,097
Harvard University	2	30,417
Tufts College	1	22,680
Michigan: University of Michigan	1	$25,0[00]
Minnesota	2	27,[6]00
University of Minnesota	1	7,[0]00
Individual Grants	1	20,[0]00
Missouri	3	25,[0]00
St. Louis University	1	4,[0]00
Washington University	2	20,[6]00
New Jersey: New Jersey State Department of Health	1	36,[6]00
New York	8	135,[0]00
University of Buffalo	1	2,[0]00
Cornell University	1	36,[2]00
Memorial Hospital for Treatment of Cancer	2	37,[2]00
New York State Department of Health	2	18,[8]00
New York University	1	2,[0]00
Roswell Park Memorial Institute	1	37,[2]00
North Carolina: Wake Forest-Bowman Gray Medical	1	3,[2]00
Ohio	4	52,[0]00
University of Cincinnati	1	5,[0]00
Ohio State University	1	10,[0]00
Ohio State Department of Health	2	36,[0]00
Pennsylvania: University of Pennsylvania	2	19,[6]00
Tennessee: University of Tennessee	1	20,[0]00
Texas	4	33,[6]00
Nix Tumor Clinic	1	7,[0]00
University of Texas	3	25,[6]00
Utah: University of Utah	2	38,[0]00
Washington: University of Washington	2	58,[5]00
Israel: Kupat-Holim	1	3,[5]00
Hawaii: Hawaii Board of Health	1	9,[1]00

National Institute of Cancer traineeship awards approved for payment from fiscal year 1951 funds by State and institution

State and institution	Cancer	
	Number	Amount
Grand total	135	$359,18[illegible]
Arkansas: University of Arkansas	1	3,500
California	7	23,380
University of California, Berkeley	6	20,360
Stanford University	1	3,020
Colorado: University of Colorado	1	3,650
Connecticut: Yale University	1	3,170
District of Columbia	9	22,040
Georgetown University	4	10,810
George Washington University	3	7,250
Washington Institute of Gerontology	1	3,360
Freedmen's Hospital	1	620
Georgia	2	7,220
University of Georgia	1	3,650
Emory University	1	3,570
Illinois	6	11,960
Michael Reese Hospital	2	2,590
Chicago Tumor Institute	2	2,620
Provident Hospital	1	3,630
University of Illinois	1	3,120
Iowa: State University of Iowa	1	3,640
Kansas: University of Kansas	2	3,690
Maryland	5	15,780
University of Maryland	2	7,260
Johns Hopkins University	3	8,520
Massachusetts	8	18,203
Peter Bent Brigham Hospital	2	5,330
Massachusetts General Hospital	2	4,930
Tufts College	1	3,420
Lahey Clinic, Boston	2	3,633
Massachusetts Memorial Hospital	1	890
Michigan: University of Michigan	3	9,630
Minnesota: University of Minnesota	3	10,230
Missouri	9	$27,675
Ellis Fischel State Cancer Hospital	2	7,290
Washington University	4	9,445
St. Louis University	2	7,300
Homer Phillips Hospital	1	3,640
New York	34	100,590
Memorial Hospital	20	56,910
Mount Sinai Hospital	1	3,550
New York Medical College	2	6,720
New York University	4	10,820
Columbia University	2	5,860
Presbyterian Hospital	2	5,780
Montefiore Hospital	2	7,300
Rochester University	1	3,650
North Carolina	7	18,220
Duke University	4	10,860
Wake Forest-Bowman Gray	3	7,360
Ohio	3	6,600
University of Cincinnati	2	3,490
Western Reserve University	1	3,110
Oregon: University of Oregon	2	3,100
Pennsylvania	17	37,380
Pennsylvania Hospital	2	3,080
University of Pennsylvania Graduate Hospital	1	2,170
Jefferson Medical College	3	7,200
University of Pennsylvania	9	19,560
American Oncologic Hospital	2	5,370
Tennessee	4	9,670
University of Tennessee	3	9,480
Oak Ridge National Laboratory	1	190
Texas: University of Texas	4	5,330
Virginia: Virginia Medical College	1	3,350
Washington	1	3,050
University of Washington	[1] 1	180
Swedish Hospital		2,870
Wisconsin: Wisconsin General Hospital	1	3,340
France: Currie Foundation	1	310
England: Christie Hospital-Holt Institute	1	780
Canada: McGill University	1	3,650

[1] This trainee was both at University of Washington and at Swedish Hospital.

National Cancer Institute fellowship awards [1] approved for payment from fiscal year 1951 funds, by State and institution

	Number	Amount
Grand total	189	$495,975
California	15	40,758
University of California, Berkeley	6	15,500
University of Southern California	1	2,350
Stanford University	5	12,703
California Institute of Technology	3	10,205
Colorado: University of Colorado	1	1,950
Connecticut: Yale University	6	16,245
District of Columbia	3	7,900
George Washington University, Warwick Memorial Clinic	2	4,300
Garfield Memorial Hospital	1	3,600
Georgia: Emory University	1	1,950
Illinois	18	47,742
University of Chicago	17	45,392
Northwestern University	1	2,350
Indiana: University of Indiana	1	3,600
Iowa: State University of Iowa	1	2,350
Kansas: University of Kansas	1	3,000
Maine: R. B. Jackson Memorial Laboratory	3	3,296
Maryland	8	20,193
Johns Hopkins University	7	18,243
University of Maryland	1	1,950
Massachusetts	24	71,239
Boston University	4	10,187
Harvard	12	37,710
Massachusetts General Hospital	4	11,442
Massachusetts Institute of Technology	2	6,800
Beth Israel Hospital	1	3,300
Tufts College	1	1,800
Minnesota: University of Minnesota	8	18,077
Missouri	6	13,455
St. Louis University	1	3,900
Washington University	5	9,555
Nebraska: University of Nebraska	1	$2,350
New Jersey	3	6,900
Rutgers University	1	1,950
Princeton University	2	4,950
New York	37	102,448
Columbia University	12	32,472
Cornell University	2	4,700
Memorial Hospital for Treatment of Cancer	8	24,750
Montefiore Hospital	1	3,900
Mount Sinai Hospital	1	3,300
New York University	3	8,550
University of Rochester	6	14,315
Rockefeller Institute for Medical Research	1	3,300
Harlem Hospital	1	3,300
Polytechnical Institute of Brooklyn	2	3,850
North Carolina: Duke University	1	1,200
Ohio	4	10,650
University of Cincinnati	1	2,350
Ohio State University	1	2,350
Western Reserve University	2	5,950
Oklahoma: University of Oklahoma	1	3,600
Oregon: Oregon State College	1	2,350
Pennsylvania	7	18,688
Jefferson Medical College	1	2,130
Institute for Cancer Research and Lankenau Hospital Research Institute	2	6,300
University of Pennsylvania	4	10,258
Rhode Island: Brown University	1	1,950
Utah: University of Utah	3	9,300
Washington: University of Washington	1	1,950
Wisconsin: University of Wisconsin	7	17,771
France: University of Paris	1	3,240
Denmark: Carlsberg Foundation	1	3,650
Sweden: Wenner Grens Institut	1	185
Switzerland: Eidgenessische Technische Hochscule	1	3,600
Germany: Kaiser Wilhelm Inst. Fur Zell	1	3,000
Fellows in U. S. Government institutions	21	51,313

[1] These 189 awards are distributed among 25 States, the District of Columbia, and 5 foreign countries.

Mr. FOGARTY. I will also ask that the table on page 138 and 139 which shows a similar breakdown for the State grants be inserted in the record.

(The table referred to is as follows:)

Allocation of grant-in-aid funds for cancer control, fiscal years 1951, 1952, and 1953

State or Territory	1951 allocation	1952 allocation	1953 allocation (tentative)	State or Territory	1951 allocation	1952 allocation	1953 allocation (tentative)
Alabama	$70,700	$73,000	$73,000	New Hampshire	$14,600	$13,700	$13,700
Arizona	19,800	19,500	19,500	New Jersey	92,300	89,000	89,000
Arkansas	52,400	48,300	48,300	New Mexico	18,200	19,700	19,700
California	176,200	170,400	170,400	New York	274,900	267,200	267,200
Colorado	30,500	29,900	29,900	North Carolina	87,200	87,400	87,400
Connecticut	38,300	36,900	36,900	North Dakota	17,700	17,200	17,200
Delaware	5,900	6,000	6,000	Ohio	151,300	145,300	145,300
District of Columbia	15,600	13,800	13,800	Oklahoma	55,400	50,900	50,900
Florida	50,500	54,400	54,400	Oregon	37,300	32,400	32,400
Georgia	72,500	75,600	75,600	Pennsylvania	213,600	198,700	198,700
Idaho	18,000	16,900	16,900	Rhode Island	15,300	15,400	15,400
Illinois	162,300	158,200	158,200	South Carolina	49,800	49,600	49,600
Indiana	79,000	74,600	74,600	South Dakota	18,600	18,200	18,200
Iowa	59,600	54,400	54,400	Tennessee	72,800	72,800	72,800
Kansas	44,500	42,200	42,200	Texas	147,000	145,200	145,200
Kentucky	72,900	69,700	69,700	Utah	19,200	18,400	18,400
Louisiana	61,800	60,600	60,600	Vermont	11,500	11,200	11,200
Maine	24,700	24,200	24,200	Virginia	63,100	65,100	65,100
Maryland	40,600	41,300	41,300	Washington	46,400	44,400	44,400
Massachusetts	99,000	94,900	94,900	West Virginia	42,300	41,600	41,600
Michigan	115,500	111,900	111,900	Wisconsin	70,500	68,300	68,300
Minnesota	66,700	62,400	62,400	Wyoming	11,800	11,100	11,100
Mississippi	63,800	61,200	61,200	Alaska	10,500	9,900	9,900
Missouri	87,300	82,400	82,400	Hawaii	10,700	9,600	9,600
Montana	16,300	16,600	16,600	Puerto Rico	59,000	55,700	55,700
Nebraska	33,800	32,300	32,300	Virgin Islands	1,400	1,300	1,300
Nevada	9,400	9,100	9,100	Total	3,200,000	3,100,000	3,100,000

GRANTS FOR SPECIAL CONTROL PROJECTS

Mr. FOGARTY. "Grants for special control projects"? That is where you have the reduction of $150,000 which you talked about a while ago?

Dr. HELLER. Yes, sir.

DIRECT OPERATIONS RESEARCH

Mr. FOGARTY. Now, under the next heading "Research," that is your own Institute, and includes the 52 additional physicians for the clinical center at Bethesda?

Dr. HELLER. Yes, sir.

Dr. TOPPING. That also includes a small amount for the visiting scientist program that Dr. Sebrell mentioned this morning.

Mr. FOGARTY. I believe Dr. Sebrell said you might speak to that. How much is that?

Dr. HELLER. In this case we have $7,000 in the budget to start this program which takes care of two such visiting scientists.

This visiting scientist program, Mr. Chairman, is designed to enable very fine scientists to come to our institution to work in our laboratories, to carry out projects of interest to them and to us. The program provides an opportunity for our young scientists to absorb the skills and philosophy of these good men and to enable them to remain here and to pursue their interests and work which is parallel with ours in the field of cancer research.

PROSTATE CANCER DETECTION

Mr. FOGARTY. Is there any way of detecting cancer of the prostate today?

Dr. HELLER. Yes, sir, Mr. Chairman, there is. It is possible through manual palpation. That is the actual examination of the prostate through rectal examination. The finding of a small nodule makes one suspicious, and the so-called cytologic-smear method may be used. It is possible through the introduction of a tube to see the nodule, take a biopsy of it, and subsequently to perform surgery upon a patient with a tumor.

There are certain other chemical methods, but generally the cancer has to be far along before these chemical methods indicate it.

The best method we have, I believe, is manual palpation.

VALUE OF RESEARCH PROGRAM

Mr. FOGARTY. Doctor, every once in a while when we have this bill up on the floor, we are told by some Members of Congress who do not believe in research of any kind, that we have been throwing these millions of dollars down a rat hole in the past few years when we appropriated these funds for these various medical research programs.

Do you think that this appropriation is worth while and that it has produced results?

Dr. HELLER. I do, Mr. Chairman, most emphatically. I believe this program is a good program. I believe it has produced many advances and has stimulated many men in the cancer field. I think it has furthered the management of cancer and certainly the diagnosis, and also has given us introduction into the field of cancer-preventive medicine.

I feel very much, Mr. Chairman, that this is a worth-while program which we are pursuing vigorously and hope to continue to pursue.

RELATIONSHIP WITH VOLUNTARY ORGANIZATIONS

Mr. FOGARTY. Your relationship with the American Cancer Society and other voluntary organizations doing work in this field has been very close in the past, has it not?

Dr. HELLER. That is correct, Mr. Chairman. We have worked very closely together. There is a very fine working relationship started when Dr. Scheele was Director of the Cancer Institute and I am happy to say that this same fine relationship continues.

I am one of the national directors of that organization. We sit in on the deliberations of their granting panels which grant awards for projects and they, in turn, sit in with ours in an observer's sense. We keep each other abreast of what is going on and actually collaborate, particularly in the field of visual education and education of lay persons. It has been a very fine working experience.

AMOUNT COLLECTED BY AMERICAN CANCER SOCIETY IN 1951

Mr. FOGARTY. What did the American Cancer Society collect in 1951?

Dr. HELLER. Something on the order of $15 million, Mr. Chairman. The exact amount I do not know, but I can introduce it in the record, if you wish, sir.

(The information is as follows:)

The American Cancer Society collected $14,974,513.69 in 1951, 60 percent remains in the State divisions and $3,743,628 of the remaining 40 percent is used for cancer research. This was over a million dollars short of requests for projects.

TEACHING GRANTS FOR MEDICAL SCHOOLS STARTED 1948

Mr. DENTON. How long have you been paying money to the medical schools for teaching in regard to cancer? What do they teach, cancer detection or what?

Dr. HELLER. All phases, Mr. Denton, detection, diagnosis, management, and prevention. All phases of cancer are taught in the general medical curriculum.

All of them approach it usually in two ways, either directly as cancer, or across through other subjects. The program was started in 1948, sir.

Mr. DENTON. Had the Government been giving money to medical schools from any other source before that?

Dr. HELLER. Not to my knowledge, Mr. Denton.

RESEARCH GRANTS TO MEDICAL SCHOOLS STARTED 1937

Dr. TOPPING. May I interrupt: Not for a teaching purpose, but they had funds for research since the Cancer Institute Act in 1937.

Mr. DENTON. Has there ever been any contention made that the Government was trying to control medical education in the States, because of this grant program?

Dr. HELLER. None that I know of, Mr. Denton.

Mr. DENTON. Does it have the approval of the American Medical Association?

Dr. HELLER. And the Association of American Medical Colleges.

Mr. DENTON. Both of them approve of this grant program?

Dr. HELLER. Yes, sir.

NEW DISCOVERIES IN DETECTION AND TREATMENT OF CANCER

Mr. DENTON. Doctor, since you were before the committee last year, have there been any new discoveries in the detection and treatment of cancer?

Dr. HELLER. Yes, sir; the balloon method of diagnosing cancer is new this last year, which offers a very hopeful outlook in the diagnosis of stomach cancer. There have been improvements and refinements in the method of diagnosis. I don't know of any other particular ones which have come to the front in this yearly period.

Now in the treatment of cancer, several have come about, or have been sharpened since we met last year. The work that Dr. Scheele mentioned concerning the adrenalectomy operation by Dr. Huggins. The removal of both adrenal glands, while done previously, has not been brought to medical attention for the particular management of cancer on this scale, from a source as reputable and authoritative as Dr. Huggins. It is a new development in the sense of a discussion from last year. Some of the other work is new with the management of cancer through the administration of sex hormones, such as the

work done by Dr. Hertz with the massive intraveneous use of estrogen, in the management of breast and prostate cancers.

I do not mean to imply that there is anything new in use of sex hormones in the management of cancer but these particular advances have occurred in the last year or two.

CAUSES OF CANCER

Mr. DENTON. It is still very much of an unknown quantity, just what cancer is, is it not, or what causes it?

Dr. HELLER. Yes, sir, there is a paradox here. We know a lot about what cancer is and what causes it and yet at the same time we do not know much of the exact cause. We know that sunlight can cause skin cancers. We know that certain other things can cause cancers, such as certain chemicals. Genetically, we can produce 80 to 90 percent of a certain strain of mice that will come down with breast cancer. We know there are certain genetic implications in humans but since we are not an inbred strain of animals, we cannot hope for too much scientific advance in this field.

At the same time, we do not know the exact cause of cancer, Mr. Denton. Some think that some cancers are caused by virus. Some think there is some other infectious origin. We are up against the proposition that there are just about as many cancers as there are diseases generally, so we are not dealing with one cancer, we are dealing with many types of cancer. It is complex and cuts across basic sciences. It certainly cuts across all medical sciences completely. That is why we are working so vigorously and in so many places to establish certain basic facts which we need to know in order to control the disease completely.

ESTIMATED NUMBER OF ANNUAL DEATHS DUE TO CANCER

Mr. DENTON. Do you have any figures as to how many people die with cancer per hundred thousand, or other figures that show its prevalence in this country and whether it is increasing or decreasing?

Dr. HELLER. Yes, I can indicate, Mr. Denton, that about 210,000 deaths from cancer will occur this year.

The total number of deaths has steadily been increasing because there are more of us. We are acquiring an older population.

On the other hand, about the only cancer probably that can be established to be on the increase is cancer of the lung. Why this should be, no one knows.

RELATION OF SMOKING TO LUNG CANCER

Mr. FOGARTY. What about smoking?

Dr. HELLER. Smoking has been incriminated. Very heavy cigarette smoking has been established by a number of investigators to have a distinct correlation with the occurrence of lung cancer but we are not prepared to say that cigarette smoking is a cause of cancer. Certainly it is related to it. Something else is the trigger mechanism. Certainly cancer of the lung occurs more frequently among people who are heavy smokers. There is something that trips the mechanism that we have not yet established.

PROBLEMS INVOLVING PRACTICAL USE OF FLUOROSCOPE FOR MASS SCREENING TESTS

Mr. DENTON. Now this fluoroscope or the camera that you spoke about. How practical would it be to have that in general operation over the country? Is it very expensive?

Dr. HELLER. It is pretty expensive, Mr. Denton. It could be used in medical centers very well and it could be adapted for general hospitals. The big difficulty of course is getting people in for this sort of examination. The cost is not terrific but examination would have to be done every 6 months or at least every year to be completely effective. When we are dealing with a population with as many people over 35 or 40 as we have, it gets to be quite a problem in mass management. We must and are trying to establish other practices which will enable us to spot persons who may have cancer.

For instance, one thing we know is that people who do not have any acid in their stomachs stand a much, much greater chance of having cancer of the stomach than those who have normal amounts of acid.

Mr. SCHWABE. Or hyperacidity?

Dr. HELLER. That has not been conclusively established. It is tied up with ulcer formation perhaps. We know that hyperacidity and no acidity in the stomach enhance the chances of acquiring cancer of the stomach.

There is a method of examination of the urine which indicates a low acid in the stomach. That provides a useful screening device. We can take those responding positively to this test and examine them with this photofluorographic unit referred to previously, and thereby get a more intelligent approach to the diagnosis of cancer of the stomach.

Dr. TOPPING. Dr. Russell Morgan at the Johns Hopkins Hospital developed this instrument Dr. Heller described to you, has been quite instrumental in the development of some of the equipment that has been used successfully in the mass screening for tumors. He was with the Public Health Service for quite some time during the war. His main objective when he started on this was to try to develop a technique that would be applicable to rather large numbers of people cheaply and efficiently.

Now that has not been accomplished, as Dr. Heller has said, but certainly great steps have been applied in the last 2 or 3 years by Dr. Morgan.

I would also like to add that we have just been successful in having Dr. Morgan's first assistant agree to come to the clinical center next July.

Mr. DENTON. You do not have one of those devices out at the medical center do you?

Dr. HELLER. No sir; not as yet sir.

Dr. TOPPING. We undoubtedly will have one. Particularly when Dr. Hilbish comes as chief radiologist with the clinical center.

Mr. DENTON. When you make this examination and you find something there, how can you tell, for instance, whether it is a cancer or a tumor?

Dr. HELLER. It at least arouses our suspicion and we can then undertake tests actually to visualize this cancer in the stomach, by inserting a tube and looking at the lesion, getting the biopsy or cells to establish the diagnosis through microscopic inspection.

Once we know that something is there, then we put into operation the known medical techniques for examination of the stomach and its contents, and if it is established to be cancer, appropriate means can be undertaken—usually by excision of the stomach or a portion of the stomach.

Mr. DENTON. This was supposed to have been a device like the electrocardiogram or taking an X-ray of your chest to determine the trouble, but it hasn't been developed to the point where it is practical yet?

Dr. HELLER. That is correct; not practical in the mass-screening sense.

Dr. TOPPING. That is the ultimate objective, however.

Mr. DENTON. That is all.

Mr. FOGARTY. Mr. Schwabe?

INCREASED NUMBER OF CANCER CASES PARTLY ATTRIBUTED TO IMPROVED METHODS OF DETECTION

Mr. SCHWABE. Doctor, of course there are many forms or kinds of cancer, as we laymen would say?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. The modern methods of detecting and diagnosing cancer have so improved that would you not say that in all probability the number of cancer cases known today has greatly increased because we are able to detect them more readily and more positively than we were formerly?

Formerly, there might have been a great many cancer cases which went undetected as being any form of cancer?

Dr. HELLER. I think that is correct.

Mr. SCHWABE. So as bad as it is, it may not be as bad as it sounds. Is that not correct?

Dr. HELLER. That is my contention, sir.

Mr. SCHWABE. Similarly with lung cancer there are indications that heretofore it may have been diagnosed in many instances as some other form of cancer or overlooked entirely?

Dr. HELLER. I think that is quite correct, Mr. Schwabe. Autopsy frequently revealed that there was cancer of the lung when the patient may have died from something else, an accident or something else, so you are quite correct, sir. Many cases occur that we know nothing of.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. SCHWABE. How much did you ask the Bureau of the Budget for fiscal year 1953?

Dr. TOPPING. The total request to the Bureau of the Budget for 1953 was in two forms, one under the ceiling and the other as a B budget.

Mr. SCHWABE. Give us both of them.

Dr. TOPPING. Under the A budget, or under the ceiling, it was $16,335,000.

In the B budget it was $1,550,000, making a total of $17,885,000.

EFFECT OF DECREASE IN BUDGET ALLOWANCE

Mr. SCHWABE. Doctor, with all the contributions that come in and with the appropriations that you have requested here and what has been allowed by the Bureau of the Budget that you have attempted to justify here today, is it your judgment that that total will be ample to afford practically all the research and work that you contemplate as being necessary and that you would be able to do effectively during the fiscal year 1953, as far as you can now foresee?

Dr. HELLER. Mr. Schwabe, that figure of $17,000,000 plus would enable us to do a much better job, as we indicated, and with that we believe we could do a very creditable job and a better job, of course, than we can do with a lesser amount than that.

Mr. SCHWABE. It is natural for you to say that, and I am sure you are sincere about it, because that was the way in which you worked out your problem and your program. But, by and large, the amount that will be available here if we appropriate the amount the Bureau of the Budget has approved, plus that which will come in from other sources to supplement the work you are attempting to carry on, the drives for cancer, and so forth, all told, don't you think that will be about as much money as can effectively be used and that the program will not be seriously handicapped without more?

Dr. HELLER. No, Mr. Schwabe; the drive to which you referred, the American Cancer Society drive——

Mr. SCHWABE. That is the principal one, of course.

Dr. HELLER. Yes, sir. That carries on work which, of course, complements work that we are doing.

Mr. SCHWABE. And dovetails into your program nicely, does it not?

Dr. HELLER. That is correct, sir. However, I believe that it would be desirable to have more funds. We believe we could do a much better job with more funds. Naturally, we will do the best we can with what the Congress sees fit to make available.

Mr. SCHWABE. I am sure you will, but I was trying to get at how badly you might be crippled in accordance with your business judgment if this figure were approved.

Dr. HELLER. Certainly, Mr. Schwabe, we feel that we would like to have more funds in the grant area for research grants, and particularly for the so-called special control grants. That is our area in which we feel the need keenly.

Mr. SCHWABE. That is where you were cut most sharply, is it not?

Dr. HELLER. That is correct, sir. We can do a job with this. We can't do as good a job. I believe it would be highly desirable if we had necessary money to meet at least the majority of the good projects which are now coming to us. We do not have such funds at present. We have a considerable backlog of good applications on hand. That is, projects from workers throughout the country who have good ideas which they would like to have the opportunity to follow through and work with in their various institutions. We do not have sufficient funds to handle more than about a fifth of those for this coming year.

Mr. SCHWABE. Of course, some of those, after careful screening, you feel at times are not perhaps as desirable as others anyway, and you select those that you think would be productive of the best results, naturally, do you not?

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. And it is a wholesome and health condition it seems to me to have more applications than you can take care of, which results, it seems to me, in your being able to make a better selection.

Dr. HELLER. Of course, it is perfectly understandable that when we see a good application, we hate to see it go by the board.

Mr. SCHWABE. You are anxious to take that one on, I am sure.

Dr. HELLER. That is correct.

COORDINATION OF FEDERAL AND PRIVATE GRANTS

Mr. SCHWABE. But that is life, I think. We all have to experience some of those things.

This American Cancer Society has a fund-raising program, and the money they raise is approximately the amount that you are requesting here of the Congress for the next fiscal year. Is any of that money made available to you, directly or indirectly?

Dr. HELLER. No, sir.

Mr. SCHWABE. Has there ever been any collaboration with those who raise those funds to see if they could not be made available for purposes that you or your Institute thinks, perhaps, more desirable and that might be more effective than the uses to which they are being put now?

Dr. HELLER. Yes, Mr. Schwabe, in the sense that we confer with them on program. We might see something that we think ought to be accomplished and in several instances we have gone in and put up half the funds and they put up half the funds and accomplished this desired end.

Mr. SCHWABE. They cooperate with you in some respects along that line?

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. Is there any reason why you should not say, "Now here is an application that appeals to us as being exceptionally good. Won't you help us on this?"

Dr. HELLER. That is right.

Mr. SCHWABE. In those cases do you get their cooperation and assistance, financially, sometimes?

Dr. HELLER. Well, in this sense, Mr. Schwabe: When we have a good project that we were talking about, and we do not have sufficient funds to meet it, we refer that project to them and say "This looks like a good project. Perhaps you would care to consider it."

Frequently they have had money enough to meet this request and have made the grant available to that applicant. That has happened frequently.

Similarly, they have had times when they did not have sufficient funds and have referred to us good grants for which perhaps at that time we had sufficient funds to support the best ones. At times there was referred perhaps a better grant than any we had seen, and we could then present it to our Council for recommendation.

Mr. SCHWABE. I think that is all, Mr. Chairman.

EXTENT OF CANCER-CURE INVESTIGATION WITH 1952 FUNDS

Mr. FOGARTY. To what extent is the Institute investigating cancer cures under the present funds?

Dr. HELLER. We support the National Research Committee on Diagnosis and Therapy. That amount of money is about $12,000 a year. In addition our Council has indicated that when a grant is submitted to it which has to do with the so-called cancer cure, that it will give high priority to such a project.

We are supporting a number of projects which have to do with diagnostic tests and, of course, several which have to do with cures and the therapy of cancer. We are not supporting any grants at present which fall into the realm of questionable cancer cures. They must meet certain standards and criteria as set forth by us before they are awarded a grant.

Mr. FOGARTY. Do you have any further statement?

DIETARY CANCER CURES

Mr. DENTON. I would like to ask one more question. We always hear about these different cures for cancer. I have heard about one doctor who treats people for cancer by giving them juices. Juices of carrots and watercress and things of that nature.

One man told me that a member of his family had been treated and very successfully. The doctor said that sometimes it would work and sometimes it would not. Do you know the case I am referring to?

Dr. HELLER. I guess that is the Dr. Gerson therapy of which we have some knowledge. Frequently the so-called alleged cures or improvement result in people who do not have cancer or think they have cancer or have had diagnosis of cancer and simply a good dietary regimen improves them. I do not know personally of any person who has had cancer who has been cured by this form of therapy. I know many claims have been made for it and it still pops up from time to time.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

Dr. HELLER. I have none, Mr. Chairman.

Mr. FOGARTY. Thank you very much.

JANUARY 31, 1952.

MENTAL HEALTH ACTIVITIES

WITNESSES

DR. R. H. FELIX, DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH
DR. NORMAN H. TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
DR. WILLIAM H. SEBRELL, DIRECTOR, NATIONAL INSTITUTES OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$9,505,000	$10,518,987	$10,895,000
Proposed supplemental due to pay increases		48,000	
Applied to contract authorization	−2,444,481	−573,000	
Reimbursements from non-Federal sources	17,100	20,330	20,430
Total available for obligation	7,077,619	10,014,317	10,915,430
Unobligated balance, estimated savings	−90,375		
Obligations incurred	6,987,244	10,014,317	10,915,430

NOTE.—Reimbursements from non-Federal sources above are for personnel detailed to the Juvenile Court District of Columbia, in accordance with provision of the District of Columbia Appropriation Act.

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Grants:			
(a) Grants for research and training:			
(1) Research projects	[1] $1,198,628	[1] $1,663,000	[1] $1,662,000
(2) Research fellowships	221,656	256,000	250,000
(3) Training grants	[1] 3,377,432	[1] 4,000,000	3,750,000
(b) Grants for detection, diagnosis, and other preventive and control services	3,074,429	3,100,000	3,100,000
2. Direct operations:			
(a) Research	605,020	825,000	1,305,000
(b) Other direct operations:			
(1) Review and approval of research and training grants	99,617	126,000	123,000
(2) Training activities	108,152	94,987	77,000
(3) Technical assistance to States	377,885	447,330	405,430
(4) Administration	291,906	325,000	320,000
Total funds for program performance	9,354,725	10,837,317	10,992,430
Adjustment for obligations incurred in advance of program performance	[1] −2,367,481	[1] −823,000	[1] −77,000
Obligations incurred	6,987,244	10,014,317	10,915,430

[1] Some of the obligations for grants for research projects and training were incurred several years in advance of actual program performance. By means of the adjustment line shown in this schedule, the amounts by activity reflect the actual performance level for each year.

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	245	242	265
Full-time equivalent of all other positions	8	8	5
Average number of all employees	190	226	237
Average salaries and grades:			
General schedule grades:			
Average salary	$4,317	$4,818	$4,994
Average grade	GS-6.9	GS-6.9	GS-7.2
Crafts, protective, and custodial grades:			
Average salary	$2,252	$2,632	$2,672
Average grade	CPC-3.0	CPC-3.0	CPC-3.0
Ungraded positions: Average salary	$4,785	$4,925	$5,794
01 Personal services:			
Permanent positions	$943,230	$1,206,337	$1,320,850
Part-time and temporary positions	36,356	41,700	28,500
Regular pay in excess of 52-week base		3,620	4,260
Payment above basic rates	5,368	4,980	5,300
Total personal services	984,954	1,256,637	1,358,910
02 Travel	77,859	99,500	95,000
03 Transportation of things	4,344	6,050	6,800
04 Communication services	7,580	9,900	10,600
05 Rents and utility services	108	500	500
06 Printing and reproduction	17,984	20,800	21,000
07 Other contractual services	14,923	21,900	47,940
Reimbursements to "Operating expenses, National Institutes of Health, Public Health Service"	219,292	314,400	608,200
08 Supplies and materials	59,670	48,800	55,400
09 Equipment	98,628	41,950	27,700
11 Grants, subsidies, and contributions	5,504,664	8,196,000	8,685,000
15 Taxes and assessments	1,558	2,200	2,700
Subtotal	6,991,564	10,018,637	10,919,750
Deduct: charges for quarters and subsistence	4,320	4,320	4,320
Obligations incurred	6,987,244	10,014,317	10,915,430

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$4,374,924	$1,772,328	$760,877
Obligations incurred during the year	6,987,244	10,014,317	10,915,430
	11,362,168	11,786,645	11,676,307
Deduct:			
Reimbursable obligations	17,100	20,300	20,430
Unliquidated obligations, end of year	1,772,328	760,877	783,418
Adjustment in obligations of prior years	54,855		
Obligated balance carried to certified claims account	5,027		
Total expenditures	9,512,858	11,005,438	10,872,459
Expenditures are distributed as follows:			
Out of current authorizations:			
Out of appropriations to liquidate prior-year contract authorization	2,343,044	473,000	
Out of new obligational authority	6,576,453	9,305,000	10,155,000
Out of prior authorizations	593,361	1,182,318	714,579
Out of anticipated 1952 supplemental for pay increases		45,120	2,880

Mr. FOGARTY. We have now before us the National Institute of Mental Health of the Public Health Service.

Do you have a statement for the committee, Dr. Felix?

GENERAL STATEMENT

Dr. FELIX. I have a few remarks, Mr. Chairman, which I would like to make, with the committee's permission, before we start on the actual budget.

Mr. Chairman and gentlemen, as you know, the Mental Health Institute is one of the younger ones in the National Institutes of Health and has been in existence only 6 years and only 5 with appropriations.

However, as time has gone by, we have made some definite progress and I would like to take a few minutes of your time if I may to tell you about some of these things, in order that you can know what we have done over the past few years.

PROGRESS IN MENTAL HEALTH TRAINING PROGRAM

I would like to begin by giving you some information about the results to date of our program in training. As you will remember, under the law, one of the authorizations was for the training of individuals in the various fields pertinent to mental health, psychology, nursing, psychiatry, social work, and so forth, and training of physicians, generally.

The program has now reached a point where we are beginning to see some beginning inroads made into the personnel shortages in these fields, which is essential if we are to properly staff hospitals and clinics, as well as to take care of other activities in the mental health field.

Under our stipend program to date we have completed the training of 1,700 people in the four fields of psychiatry, social work, nursing, and psychology.

NUMBER OF INSTITUTIONS RECEIVING TRAINING GRANTS

At the present time we have 183 training grants operating in institutions over the United States, which are assisting in the training or in some cases actually making possible increased facilities—not physical facilities, but increased personnel and so forth—for the teaching of between 8,500 and 9,000 individuals who are undergoing training in these specialties.

These individuals are not on our stipends but are in institutions where the grants to the institutions are operating and making possible additional professors and so forth.

GRANTS TO MEDICAL SCHOOLS

You will remember that over the last 2 years—this year being the third—grants have been made to 42 of the medical schools in the country to improve the teaching not only of psychiatry as a specialty, but the teaching of an understanding of the human being and the role sickness plays in his whole life, as well as the role emotions play in convalescence and in illness.

In the last 2 years—that is, prior to this current year—6,000 young physicians have graduated, about 3,000 each year, from these 42 medical schools.

Now these 6,000 physicians have a much better understanding of the individual as a person as well as a physiological organism, and are in a much better position as a result of this training to deal with the emotional problems of the individual, as well as to deal with the problems which fall within his field.

BENEFITS DERIVED FROM TRAINING GRANTS

Interestingly enough, several institutions as a result of these grants which this year are at a maximum of $15,000 an institution, have doubled or trebled their budgets so that this particular grant is a small part of the total amount going into the expanded teaching in this area, and these funds are used to develop new areas of teaching in this field and test them out before they are put into the regular university budget.

Currently, in these 42 medical schools about 13,000 young men and women are training to be physicians, and all 13,000 of these are receiving training in this phase of medicine.

They are receiving training in the better understanding of the emotional aspects of illness and convalescence.

The 6,000 who have graduated to date in those 2 years, I might say, are a little better than 50 percent of all the young physicians graduated from the medical schools in the United States during the last 2 years.

Interestingly enough, a number of individuals who received their training on our stipends now hold important positions on faculties. I recall offhand two who are chairmen of their departments in medical schools, who received their training on these stipends, and now the seed is multiplying many times over.

RESEARCH PROGRAM DEVELOPMENTS

In the field of research our intramural program has been small because of lack of space at Bethesda and will be small until such time as the clinical center is completed. However, we have had some work going on, not only there, but elsewhere in the United States.

I reported to you last year about some of this work. It has gone forward further and looks even more promising. The work is being done at the Worcester Foundation for Experimental Biology at Worcester, Mass., a cooperative project with the Institute of Mental Health, studying some of the diseases like dementia praecox (schizophrenia), one of the most serious mental disorders.

STUDIES OF DEMENTIA PRAECOX

It has been discovered that the adrenal cortex of the schizophrenic operates differently than does the adrenal cortex of a normal individual. It puts out abnormal ratios of the steroids which are secreted in the urine and at least one abnormal steroid not found in the normal urine is found in the urine of schizophrenic men. We have not yet studied women on this.

An interesting byproduct of this which does not bear directly on mental health but on this whole problem of the adrenal steroids is the fact that in this laboratory they have discovered an enzymelike substance that destroys ACTH in the body. Now this would be expected because most of the substances such as ACTH have to be destroyed or they would build up into large quantities in the body. I do not believe it is safe here to conjecture because I am on the record and it might be misinterpreted at some time in the future—someone reading this and not quite getting the whole context—so suffice it to say on the record that this brings up some interesting conjectures as to the cause of dementia praecox, and it follows from that, the treatment and cure of it.

STUDIES IN MORPHINE SUBSTITUTES

Our Addiction Research Center at Lexington, Ky., has been working, as you know, for many years but a number of very interesting things have come out of the last year or two down there. One of them is the testing of an interesting drug known as N–allylnormorphine. This is a drug which apparently the body cannot distinguish from morphine, and yet it is inert insofar as relieving pain or supporting addiction is concerned, if given instead of morphine. Not only can the body not tell it from morphine but the body will pick it up instead of morphine once it is injected and it pushes the morphine out of the body.

Now this was found out rather dramatically. I have described in the past to you, I believe, about our test of new narcotics drugs to see how addicting they are, and if they relieve pain and so forth. This drug came down as one of those to test. One of the first tests given is to give a predetermined safe dosage of the drug to a person who is addicted, to see whether or not he goes along for the next period of time until his next shot without any evidence of withdrawal. Within a matter of minutes after injecting this drug, there is a dramatic appearance of withdrawal symptoms in full flower, with great intensity. The dosage of the drug was reduced and reduced down to as low as 2 milligrams—two-thousandths of a gram—way below the morphine dosage these people are taking—they may be taking on as high as 200 or 300 milligrams or more—and still within a matter of 5 to 10 minutes, the individual went into acute withdrawal.

Now from that, they began to wonder what would happen if this drug were given to a person suffering from acute morphine poisoning. As you probably know, morphine in overdosage causes a paralysis of the center for respiration, deep unconsciousness, and death.

Two patients during the past year have been received at the hospital practically in extremis from acute morphine poisoning. After injection of this drug, in one case the patient was awake and relieved of his symptoms within 15 minutes. The other was relieved of his serious and alarming symptoms but it took a second shot some hour or two later before he woke up.

This is the first drug to my knowledge—and I think I know the drugs in this field fairly well, having worked with them for 5 or 6 years myself—which will do this dramatic job of relieving acute morphine poisoning suddenly, with the obvious saving of life that this will mean.

The uses of this drug from the standpoint of studies of what happens in addiction are, of course, legion and very interesting.

It will afford a method, for instance, of detecting narcotic addiction in suspected addicts. If a person, let us say a person in court, is found guilty of a crime and pleads that he is an addict and therefore should be given some consideration, if he is willing to give his consent to receive a small dose of this drug, one would know in 30 minutes whether or not he were an addict.

It is also, of course, of great importance in producing symptoms of abstinence at any given time instead of waiting 2 or 3 days for these phenomena to appear.

DRUG-ADDICTION STUDIES

Now another interesting finding out of the Addiction Research Center has been with regard to the nature of drug addiction, itself. For as long as I have known, this phenomenon has been supposed to be primarily one of the brain. It was thought to be something that happened in the brain itself.

One of our doctors, Dr. Wikler, has been able to demonstrate on dogs that morphine also has an effect on the spinal cord. Through observation of certain spinal reflexes which are utilized as indicators routinely in neurophysiology, it can be shown that the spinal cord itself develops tolerance to morphine and dependence on morphine so that after a while if the drug is not given, the reflexes are just the reverse of what is observed in the normal animal. Now we know that at least the brain and spinal cord are involved in drug addiction.

Another new fact has come to light out of that laboratory: Morphine has traditionally been given for the relief of pain. It has been, I think, now thoroughly established through the work at Lexington, which has come to its height during the last year, that morphine does not decrease pain a bit; rather, it renders an individual indifferent to pain. As a result of experiments they are doing, they are now convinced that these individuals feel the pain after they have had morphine, just as much as you or I would feel a similar amount of pain if we had had no morphine, but that they are no longer apprehensive about the pain. They simply do not care if it hurts as much as they did before they had morphine.

Now this phenomenon raises some interesting conjectures, too, which we wish to explore in the very near future. This is similar to what happens when the operation known as prefrontal lobotomy is performed for pain.

EFFECT OF PREFRONTAL LOBOTOMIES

I have explained at previous hearings the operation of prefrontal lobotomy in which a cut is made in the frontal area of the brain to cut certain tracts—it has been used as a method of treatment of certain types of mental disease, and also has been found very efficacious in certain types of intractable pain.

It has been known for some time that these individuals suffered pain just as much after the prefrontal lobotomy as before but they did not seem to care—let us not say "suffer," they felt pain just as much as before, but they did not care.

This goes along with another phenomenon connected with this particular operation in which individuals who have hallucinations will tell you after the operation, "Yes, I hear those voices and they are calling me all those dirty names, but I don't care any more."

Before, they were out to kill somebody, perhaps, because someone was influencing them and causing these voices to call them these names.

Those are a few samples of what is going on intramurally.

In the extramural field a number of developments have occurred in the last 2 or 3 years which I thought might interest you.

STUDIES OF SPINAL CORD INJURIES

I don't know whether Dr. Bailey or others have told you about some interesting work that has been carried out in the case of injuries to the spinal cord. What is called paraplegia, where due to injuries, for instance gunshot wounds and so forth, the spinal cord is cut, with resulting paralysis below. A man named Windell and his associates by using a drug known as pyromin have been able to demonstrate regeneration of nerves across the cut in the spinal cord. This is a startlingly new development because traditionally it has been thought that injuries to the central nervous system could not be repaired.

One of the men working on one of our research fellowships, Dr. Clemente, has now put the frosting on the cake as it were, and has demonstrated that nerve impulses are carried on these new fibers across the cut with undiminished velocity—undiminished speed for the normal nerve impulse. Now we know nerves not only grow across, but they will carry impulses as they did before they were cut.

STUDIES OF MENTAL DISORDERS IN CHILDREN

A group working in another part of the country has been able to demonstrate that in young children, they can definitely identify preliminary symptoms of some kinds of mental disease which occurs in later life. Particularly dementia praecox; a condition known as psychopathic personality, which is a form of mental disorder which is sometimes known as moral imbecility in which the individuals are quite antisocial and usually in conflict with society; and manic-depressive psychosis.

This opens up now the possibility of identifying youngsters, 5, 6, 7, 8 years of age, and bringing them in contact with treatment facilities at a time when they are amenable to treatment.

A recent survey of work done at the Judge Baker Foundation Child Guidance Clinic in Boston has shown that of the cases brought to that clinic who were able to receive adequate psychiatric treatment and follow-up, a fraction over 91 percent of these youngsters 8 years later were still making a satisfactory adjustment to life and were not in need of further psychiatric or custodial care, but were out functioning as normal kids. Ninety-one percent of those who were able to receive this type of treatment.

STUDY OF RELATIONSHIP BETWEEN EMOTIONAL STATES AND FAULTY METABOLISM

There has been demonstrated during the past year—finally demonstrated, I should say—a very direct relationship between emotional states and the faulty metabolism in the body in cases of diabetes. Two investigators working independently in two different cities have reported during the last year that the degree of metabolic disturbance of sugar utilization parallels the degree of emotional upset or tension found in these people at that time.

STUDY OF EARLY EXPERIENCES ON LATER BEHAVIOR

There are more experiments with interesting results. I would like to mention just one because it follows up some work that I have reported here earlier. At the laboratory at Bar Harbor, Maine, Dr. Little's group, as you know, for a number of years have been breeding various inbred strains of mice which will perform in various ways.

Among other strains of mice they have developed has been one which are particularly vicious fighters. They are much like some of the stories we hear about the mouse who tells the cat to come on and he will take care of him.

They took litters of other mice when still quite young and separated them into two parts and took one-half of this litter and exposed them one by one to the fighting mice for a few minutes each day. The fighting mice proceeded to attack these little mice but before they could be harmed they were taken away, but they were thoroughly frightened.

After exposure to these fighting mice for a period of time, the young mice were taken out of this situation and allowed to grow up. When these mice were adults, those that had been exposed to the fighting mice, if exposed to them again would cower and run and try to get out of the cage, but their litter mates who had not been exposed to this would turn on these fighting mice and fight back.

We know that many of the phenomena of learning and behavior—many of the laws of learning and behavior—are equally applicable to human beings and to lower animals. One of these is the effect of certain kinds of early experience on later behavior. This nails down pretty well—although it has to be developed and checked elsewhere, and if it works out in other laboratories—it nails down pretty well one aspect of abnormal behavior seen in children which has been thought in the past to be related to a particularly stressful situation in early life. For many years those of us who have dealt with children have conjectured that if we could look back on a youngster's life, we would find such and such a situation, but we could not do more than conjecture.

Now, I think we are going to have some leads as to exactly what to look for when we find these children sick in our clinics, and also what to look for to prevent them from appearing in a clinic later when we run into such families in our practices.

GRANTS TO STATES PROGRAM

In the field of community services our State programs are beginning to roll pretty much into high gear. This is because they have been able to acquire personnel, particularly in the last couple of years,

as a result of the newly trained people coming off the production line.

The Federal grant funds used, the grants-in-aid State funds, have been used primarily as what they call a revolving fund. What they do is to use the apportionment of the Federal money which the State gets, match it with their own money and use this to do what one State has called plow new ground.

There is an area that they would like to develop. They have not been able to get the funds from their legislatures, but they think it is worth while, so they use these to plow the ground, to develop the area, to demonstrate the efficacy of a procedure, and then to take this activity up on State funds as they are able to demonstrate it and to get the money.

Also, as they have developed new clinics, they have begun to take older ones off of the Federal grant money and to develop additional new clinics with the Federal grant money.

NUMBER OF CLINICS IN 1951

In the fiscal year 1951 there were 330 clinics in the United States—and that is in every State but 2—which were supported in some part by Federal money. Of these, 158 were new clinics that would not have been in existence except for this particular phase of our activity, and 22 of these were established brand new in fiscal year 1951, but 25 clinics were taken off this particular activity and continued in full activity on State or local money during that same fiscal year.

CLINICAL TREATMENT FOR CHILDREN

About 100,000 people were seen in these clinics. About half of them were children. I have told you what the results of the Judge Baker Foundation study were on the treatment of children.

What I am trying to tell you is that now as the program is beginning to roll and it is beginning to dovetail, one part complements the other; we are getting people trained, they are going into research; they are going into State programs; we are getting more training centers moving in high gear and we are now just at the threshhold of seeing a good, Nation-wide mental health program grow up.

Now, if I can have just a minute more, Mr. Chairman, I would like to ask myself one or two questions and answer them for you.

FUTURE PROSPECTS FOR REDUCTION OF HOSPITALIZED PATIENTS

First, what can we hope for for the future? I have told you what we have done to date.

EFFECTIVENESS OF PROPER HOSPITAL TREATMENT

In the Stockton, Calif., State Hospital, they have conducted a study over several years in which they have properly staffed with trained men and women in all the various categories of personnel needed, some wards—what they call back wards of the State hospital. These are the most hopeless patients. They find that three times as many patients can be moved off of that ward and out of the hospital alive if the hospitals are properly staffed utilizing just what we know today, than if the patients are left there for custodial care.

NUMBER OF SCHIZOPHRENICS

Now, tied up with that, there are some figures which I think would be worth while to tell you. There are 100,000 schizophrenics in the United States today who are in State hospitals, who are there for the first time and who have been there for over 5 years.

The average length of time for these patients in hospitals has been 17 years.

We can expect on the basis of life expectancy, knowing the small percentage of chances of their getting out, they will be there for an average 11 years more.

ESTIMATED COST OF HOSPITALIZED MENTAL PATIENTS

I tried to calculate what the cost of this has been. The average cost per patient per year for the last 17 years in State mental hospitals has been about $300. $300 per patient per year for this group means that the public has already spent $510 million to keep these patients, and I stress that word "keep." That is all.

Prices have gone up, and so the cost of care has gone up. At the present time the average cost per year in the country is $700. If these patients live out their expected life of 11 years they will cost the public $770 million more dollars before the last one dies, if not another new patient is admitted.

This means that the public will have paid $1,280,000,000 to take care of 100,000 people for 28 years, and they will die in the place they put them when they started.

If we could reduce this by 10 percent, we would do two things. We would reduce the need for new capital expenditures for new buildings, and you gentlemen are all aware of what is happening now; we have to have another building and another building and another building on these State hospital grounds because the population continues to increase and increase. Added to this is the fact that this 10 percent would not cost $77 million that they will cost from today on until they die. And these patients can be gotten out if we can get at them and treat them energetically, to say nothing of what we can do for the new patients.

NUMBER OF SCHIZOPHRENIC PATIENTS HOSPITALIZED ANNUALLY

Twenty thousand new schizophrenic patients are admitted to State hospitals every year, of whom around 6,000 are going to stay until they die. I want to get at that 20,000. I want to get at those others, too, of course, but I want to get at that 20,000 and get at them hard. With what we have today, plus what we are going to know in the near and, perhaps in some cases, distant future, if we can keep going, keep rolling, and keep getting information, we can cut this down and we can whip this problem.

I have told you in the past, and I believe it was you, Mr. Schwabe, who last year remarked about the phenomenal results in the treatment of general paresis or syphilis of the brain. During this last year I had a psychiatrist, a professor at one of the medical schools tell me—I supose you would say somewhat complainingly if you see his point

of view—that he cannot get a good typical general paretic to show to his medical students. They just do not get there any more.

With the development of the new antibiotic drugs, with the really remarkable job that the venereal-disease people have done, plus a greater understanding of the disease and the care of the patients by the psychiatrists and people in the hospitals, you do not see it.

It was about 40 years ago, I believe, according to one of the standard textbooks of medicine, Cecil's Textbook of Medicine, 10 percent of the admissions to State hospitals in the Southern States were as a result of the disease known as pellagra, a dietary disease. You know the story of that.

Goldberger, of the Public Health Service, and others outside and inside the Service found it was a vitamin-deficiency disease.

I heard in the last couple of months that in the State hospital at Columbia, S. C., they do not average quite one admission a year due to pellagra. That is what you can do when you get after these things.

PROGRESS IN TREATMENT OF INVOLUTIONAL MELANCHOLIA

I discussed with you last year a disease called involutional melancholia, a disease coming at the change of life. As I said then, in order that we do not feel too smug, it happens to men as well as women. It was only about 35 years ago that two-thirds of these patients went into the hospital in this depressed state and never came out. Today, as a result of shock therapy, hormone therapy, and several other treatments, two-thirds of these patients are out in 1 year.

Now, here is a disease in which we do not know of an infectious agent or of a nutritional deficiency, but we do find an endocrine, a glandular, disturbance. We have used the electrical-shock treatment about which we should know more, so that we do not misuse it, together with endocrine therapy, which has resulted in a reversal of the data in this field.

Those are some of the things that we have done and that we can hope to do. There is much yet that has to be done. I hope we will be able to do it.

I think the speed with which we go forward now means the speed with which we will see patients come out later and also the speed with which we will arrive at the place where more patients stay out because they do not develop an illness in the first place.

Mr. Chairman, I would be glad to answer any questions you or the committee might have if I have not been clear.

GENERAL PROGRESS IN MENTAL-HEALTH FIELD

Mr. FOGARTY. Doctor, you feel you are making some progress in this field of mental health?

Dr. FELIX. Yes, sir, Mr. Fogarty; I do.

Mr. FOGARTY. You think definite progress has been made in the last 5 years since the Federal Government has been contributing to the mental-health activities?

Dr. FELIX. Yes, sir. We have seen this not only in the field of research but we have seen every State in the Union develop a mental-health program. When the Mental Health Act was passed only 26 States had any kind of a program other than for the hospital care

of their mental patients. We have seen the number of clinic outlets increase to now around 1,400 in the United States for the care of children and adults, just to mention two things, to say nothing of the increase in the number of training centers that have been developed and the number of young doctors that are now being trained as general practitioners with this knowledge.

PERCENTAGE OF MENTALLY ILL WITH SCHIZOPHRENIA

Mr. FOGARTY. What percentage of all the mentally ill have schizophrenia?

Dr. FELIX. On any day in the year, 40 percent of all the patients in public mental hospitals are suffering from schizophrenia. I cannot say what outside of the hospitals there may be because we do not have the data.

ESTIMATED NUMBER OF MENTALLY ILL

Mr. FOGARTY. What is your estimate of the mentally ill in the country today?

Dr. FELIX. Our best educated guess—and I use those words deliberately because we do not have a reporting system here—is that on any day of the year between 8 and 9 million people are in need of hospitalization and care or at least psychiatric care on an office or home basis.

NUMBER HOSPITALIZED

Mr. FOGARTY. How many are actually in hospitals, do you know?

Dr. FELIX. About 550,000, with about 250,000 on the waiting list who cannot get in.

PERCENTAGE OF HOSPITAL BEDS OCCUPIED BY MENTALLY ILL

Mr. FOGARTY. What percentage of the hospital beds in the country are taken up with mentally ill people?

Dr. FELIX. Between 50 and 55 percent of all hospital beds in the country.

Mr. FOGARTY. Does that take in the Veterans' Administration and all Government hospitals?

Dr. FELIX. Yes, sir.

ESTIMATED COST TO VETERANS' ADMINISTRATION FOR MENTALLY ILL

Mr. FOGARTY. Do you know the cost to the Veterans' Administration for those suffering from nervous disorders?

Dr. FELIX. I am sorry I do not have that, Mr. Fogarty. If you would like I can insert it in the record for you.

(The information requested is as follows:)

The Veterans' Administration reports that net in-patient operating expense for neuropsychiatric hospitals was $118,072,256 in fiscal year 1949. In addition, cost of out-patient services in neuropsychiatric hospitals was $1,513,540 in that year. Costs in 1951 were: In-patient care, NP hospitals, $126,565,012; out-patient care, $1,253,204.

Dr. FELIX. I know it costs something like $26 million a month in pensions to veterans of World Wars I and II suffering from neuropsychiatric disorders. That is a month now and not a year, gentlemen.

INCREASED NUMBER OF PATIENTS RELEASED UNDER ACUTE TREATMENT PROGRAM

Mr. FOGARTY. We are today able to release many of these people who are committed to a hospital, where release used to be rare. Is that not right?

Dr. FELIX. That is right, sir. Yes, sir. In one hospital in Pennsylvania, where they have instituted what they call an acute-treatment program—that is, where they get all the treatment that they can possibly give them of what we know today—they find that they are able to utilize a bed 21 times while another bed is being occupied by 1 patient who is receiving only custodial care, suffering from the same condition.

SLEEPING PILLS

Mr. FOGARTY. Are sleeping pills dangerous? Are they habit forming?

Dr. FELIX. Sleeping pills, if taken in amounts which are considerably above the therapeutic dose—that is, the amount that one would normally take to sleep—and taken over a long enough period of time, can produce a condition which, upon the withdrawal of this drug, causes the patient to become ill, an illness characterized by mental disturbances and convulsions. That dosage I want to point out is not the dosage you would take ordinarily in the course of your daily life, but is much larger than that.

Mr. FOGARTY. I think I read an article on sleeping pills in the New York Times around the middle of December. Do you recall that article?

Dr. FELIX. I do not recall it, Mr. Fogarty. I probably read it.

Mr. FOGARTY. It said it was, or at least could be, habit forming and could be very dangerous.

I do not remember the details, but I do remember it was given front-page publicity at the time.

Dr. FELIX. I do not know whether my colleagues here agree with me, but my personal comparison is to alcohol. Alcohol can be very dangerous to some susceptible people. Other people can take alcohol in varying quantities, depending upon the occasion and a lot of other things for all of their life and not become addicted to it.

I am sure that I will hear some repercussions from that statement if anybody reads the record aside from the Congress or maybe in the Congress, because I am not sure that is a belief held by everybody, but that is my personal feeling on the basis of my experience in the field. However, we ought to take precautions with regard to our alcoholic brethren, too.

Mr. FOGARTY. What do you do when you cannot go to sleep at night?

Dr. FELIX. I am one of those fortunate people who sometimes has to roll and toss as long as 30 seconds before I go to sleep, and even a toothache, unless it is very bad, does not keep me awake.

FUNDS AVAILABLE 1952

Mr. FOGARTY. Doctor, how much do you have available for 1952?

Dr. FELIX. $10,518,987, Mr. Chairman.

Mr. FOGARTY. That does not include the $48,000 proposed supplemental for the pay act increase of 1952, does it?

Dr. FELIX. No, sir.

EXPLANATION OF 1952 LIQUIDATION OF CONTRACT AUTHORITY

Mr. FOGARTY. Now, what is this $573,000 deduction "applied to contract authorization."

Dr. TOPPING. May I answer that, Mr. Fogarty?

Mr. FOGARTY. Yes.

Dr. TOPPING. We have had difficulty with this particular item for the last 3 years as you will recall. We told the committee 3 years ago that one proviso that had been made by the Appropriations Committee on forward financing was getting us into considerable difficulty in trying to keep our books straight and we told you at that time that we would like very much to liquidate that contract authority over the next 3 years so that after that we would have no forward financing; we would be strictly on a year-to-year basis. This is the last of the liquidation of that previous contract authority.

Mr. FOGARTY. That completes liquidation of the contract authority for this appropriation, is that right?

Mr. HARLOW. Yes.

EXPLANATION OF BUDGET INCREASE

Mr. FOGARTY. What does "Adjustment for obligations incurred in advance of program performance" mean?

Mr. HARLOW. That is a budgetary devise which is difficult for me to understand and I have been in this business for over 20 years.

Mr. FOGARTY. Well, who put it in here?

Mr. HARLOW. In the last analysis the Bureau of the Budget asked us to set it up this way. We are equally guilty, however.

If I may ask you to, just ignore that thing and look at the figure which appears immediately above it which does represent the money that is being devoted during those 2 years to program operations.

The difference of $155,000 is the actual difference that is going into this mental-health program in the 2 years. Now, if you will accept my word that this other thing down here is a figure which is really not significant, we can go on from there.

I have arrived at an understanding of it myself which I would be glad to give you if you want it.

Mr. FOGARTY. What is this figure there at the top of page 148, "plus $376,000"?

Mr. HARLOW. That is the difference between the actual appropriation for 1952 and the amount that we request to be appropriated for 1953.

Mr. FOGARTY. I thought you just told me $155,000 was the actual increase.

Mr. HARLOW. Yes, sir, because the $573,000 which is applied to the contract authorizations, plus an additional $250,000, which is being paid this year out of the 1951 appropriation, actually is a part of the mental health program for 1952.

Mr. FOGARTY. Are you sure you are straight on that now?

Mr. HARLOW. Yes, sir, I think I am.

Let me put it this way: If you add the proposed supplemental due to the pay increase of $48,000 as the actual increase in proposed appropriations, the increase will be $48,000 less than the $376,000 figure to which you have referred.

That is made up of the $155,013 which appears near the bottom of the page, 148, plus $173,000 which is involved in this way: We will pay in 1952 $250,000 out of the 1951 appropriation, which is really a part of the 1952 program. In 1953 we will pay $77,000 out of the 1951 appropriation, which is part of the 1953 program.

The difference between those two figures is the $173,000 that is involved in this net increase in appropriated funds.

Mr. FOGARTY. The committee print shows an increase of $376,000.

Mr. HARLOW. You have to subtract the $48,000 which we hoped to get in 1952 for the pay act increase.

Mr. FOGARTY. You had better tell us something about this adjustment. It does not make sense to me.

Mr. HARLOW. The one on page 148?

Mr. FOGARTY. Yes.

EXPLANATION OF FORWARD FINANCING

Mr. HARLOW. That refers to the forward planning which appeared in this appropriation 3 or 4 years ago under which we were authorized at that time to create obligations which would run over a period of years. In order to show what the current program is, those obligations are included in the amounts which are set up here as the money being actually devoted to the program, and since they are to be paid out of prior-year appropriations, they are deducted at the bottom, and that is that $823,000 that you see there. $573,000 of it appropriated in 1951 and applied to the contract authorization; $250,000 of it is 1951 appropriations.

Mr. FOGARTY. That is made up of the $573,000 plus the $250,000. Is that correct?

Mr. HARLOW. Yes.

Mr. FOGARTY. As I understand it, this committee I think helped establish that procedure of forward financing in 1947 or 1948 in the Cancer and Heart Institutes because of the difficulty which you had in getting people in training for 1-year periods, where they had projects which would go over a 2- or 3-year period. Was that not the reason for it?

Dr. TOPPING. That is correct, and as you will recall the cancer group did not use that for some of their programs and the mental health group did.

As we explained at the time, during the period from 1946 to 1948, when the contract authority became available, there became, I think, a general confidence among the universities and medical schools of the interest of the Federal Government. They did not feel that it was exactly an annual appropriation, and we set up devices by which some assurances could be given to them without having to resort to this extremely difficult bookkeeping sort of procedure and it was for that reason that 3 years ago we said we were going to get out of the contract authority just as soon as we could and still fulfill the obligations made under the authority of the appropriations act within 3 years. This is the third year.

AMOUNT OF BUDGET REQUEST

Mr. FOGARTY. So for all practical purposes then we should be looking at the sum under the total funds for program performance, $10,817,000 that you estimate to be available for program operations during 1952, and $10,972,000 that you are asking for 1953, showing an actual increase of $155,000. Is that correct?

Mr. HARLOW. Yes.

NEW POSITIONS TO STAFF CLINICAL CENTER

Mr. FOGARTY. You had 242 positions in 1952 and you are asking for 265, which is an increase of 23 positions in 1953. Now, I suppose that large increase of 32 positions under "Direct operations: Research" is for the same purpose that the increase in the cancer institute was for. It is to man the clinical center at Bethesda?

Dr. FELIX. That is correct, Mr. Chairman.

Mr. FOGARTY. Will you give us a breakdown in the record of those 32 positions and the cost, and also give us an estimate of what you are going to be asking for under this appropriation in 1954 to complete the manning of that center?

Dr. FELIX. Yes, sir.

(The information requested is as follows:)

National Institute of Mental Health, breakdown of new positions, clinical center, 1953

	Grade	Number of positions	Net amount
Clinical investigations:			
Endocrinologist	GS–15	1	$5,400
Psychiatrist	GS–15	2	10,800
Psychologist	GS–15	1	5,400
Psychiatrist	GS–14	4	19,200
Psychologist	GS–14	1	4,800
Psychiatrist	GS–13	2	8,360
Psychologist	GS–13	1	1,475
Supporting staff	GS–4–7	13	20,950
Pay in excess of 52 weeks			615
Total		25	77,000
Visiting scientists:			
Scientists		2	2,500
Biochemist	GS–9	1	1,265
Pathologist	GS–9	1	315
Supporting staff	GS–5	3	2,560
Pay in excess of 52 weeks			160
Total		7	6,800
Other objects costs			3,700
Net total, 1953		32	87,500

NOTE.—Projected costs in 1954 are estimated at 82 positions and $647,124, after allowing for a lapse of approximately 35 percent on new positions. These figures exclude cost of patient care and supporting research services reflected in the clinical center table for operating expenses, NIH.

EXPLANATION OF PERSONNEL DECREASES

Mr. FOGARTY. Then you have some decreases totaling nine positions?

Dr. FELIX. That is correct.

Mr. FOGARTY. Will you give us a brief statement regarding those?

Dr. FELIX. Yes, sir. We will drop one position in basic research. We are going to eliminate one control clerk in a fiscal-clerical position

in our review and approval of research and training grants and just add that work on to the other people and double up there.

We are going to eliminate two positions in our in-service training program. As you know, for several years we have been training a number of our own personnel to carry on our work in the Institute and in the field. We are going to cut back on that by two.

We are eliminating four positions in our technical assistance to States. These will be two clerical people, one nurse, and one social worker who are now consultants to the States in the regional offices. We are cutting those out of the activity. There is one position also in administration.

DETAILED INFORMATION ON GRANTS

Mr. FOGARTY. Now, Dr. Scheele was asked the other day by Mr. Busbey to get for the record some of the research projects to which you are giving grants. Now, I do not want to repeat that information here, but I would like to make the same request of you that I made of Dr. Heller to give us a breakdown of these research grants, fellowship awards, teaching grants, and traineeship awards, and a list of the members of the boards that pass upon these applications, who they are, and where they are.

Dr. FELIX. Yes, sir.

Mr. FOGARTY. Also include a table showing the State grant-in-aid funds for 1951–53.

(The information referred to is as follows:)

National Institute of Mental Health research grants approved for payment from fiscal year 1951 funds

State and institution	Number	Amount
Grand total	[1] 103	$1,068,517
California	7	79,356
University of California at Berkeley	3	53,592
University of Southern California	1	5,324
Stanford University	3	20,440
Connecticut	4	65,707
Yale University	3	63,223
Wesleyan University	1	2,484
District of Columbia	2	29,014
Georgetown University	1	18,014
Washington School of Psychiatry	1	11,000
Georgia: Emory University	1	11,016
Illinois	18	152,847
Chicago Institute for Psychoanalysis	3	30,844
University of Chicago	3	30,414
Elgin State Hospital	2	4,809
Lincoln State School and Colony	1	2,500
University of Illinois	4	45,085
Michael Reese Hospital	3	25,362
Northwestern University	1	6,930
Illinois Institute of Technology	1	6,912
Indiana: University of Indiana	1	$7,300
Iowa: State University of Iowa	4	39,72
Kansas	4	65,90
University of Kansas	2	32,340
Menninger Foundation	2	33,56
Louisiana: Tulane University	1	540
Maine: R. B. Jackson Memorial Laboratory	4	13,32
Maryland	3	10,47
Johns Hopkins University	2	2,91
University of Maryland	1	7,56
Massachusetts	13	172,28
Children's Medical Center	1	10,26
Clarke University	1	23,76
Harvard University	1	11,20
Massachusetts General Hospital	5	72,71
Putnam (J. J.) Children's Hospital	1	31,35
Boston Psychopathic Hospital	1	60
Tufts College	1	7,00
Austin Riggs Foundation	1	13,14
University of Massachusetts	1	2,24
Michigan	5	80,85
Michigan State College	1	14,98
University of Michigan	2	41,96
Wayne University	2	24,00

[1] These 103 grants are distributed among 59 institutions in 20 States, and District of Columbia.

National Institute of Mental Health research grants approved for payment from fisca year 1951 funds—Continued

State and institution	Number	Amount
Minnesota	4	$34,369
University of Minnesota	2	10,780
Rochester Child Health Institute	2	23,589
Missouri: Washington University	2	7,884
New Jersey: New Jersey State Hospital	1	11,535
New York	20	194,044
Columbia University	4	19,200
Cornell University	1	19,944
New York State Department of Health	1	7,000
New York State Psychiatric Institute	1	14,000
New York University	5	60,955
National Association of Mental Health	1	16,112
New School for Social Research	1	5,400
Bank Street College of Education	1	10,411
New York—Continued		
Scientific Personality Research Corp	1	$10,000
American Museum of Natural History	1	540
Vocational Advisory Service	1	10,568
Individual grants	2	19,914
North Carolina: University of North Carolina	2	22,426
Ohio	3	32,832
University of Cincinnati	1	14,256
Jewish Hospital, May Institute of Medical Research	2	18,576
Pennsylvania	3	$28,223
Marriage Council of Philadelphia	1	17,200
Temple University	1	9,023
Institute of Pennsylvania Hospital	1	2,000
Tennessee: Vanderbilt University	1	8,829

National Institutes of Mental Health fellowship awards [1] *approved for payment from fiscal year 1951 funds*

State and institution	Number	Amount
Grand total	69	$216,605
California: University of California at Berkeley	2	5,950
Connecticut: Yale University	4	9,550
Illinois	7	19,798
University of Chicago	4	10,248
University of Illinois	2	7,200
Northwestern University	1	2,350
Iowa: State University of Iowa	1	2,350
Louisiana: Tulane University	1	3,600
Maine: R. B. Jackson Memorial Laboratory	4	17,200
Maryland: Johns Hopkins University	7	22,011
Massachusetts	10	29,123
Harvard	9	26,339
Judge Baker Guidance Center	1	2,784
Minnesota: University of Minnesota	1	3,900
Missouri	3	$8,875
St. Louis University	1	2,350
Washington University	2	6,525
New York	18	54,910
University of Buffalo	3	8,650
Columbia University	4	17,007
Cornell University	6	15,647
New York State Psychiatric Institute	1	264
New York University	1	3,600
University of Rochester	1	3,600
Rockefeller Institute for Medical Research	1	3,900
American Museum of Natural History	1	2,242
Pennsylvania	6	16,450
University of Pennsylvania	4	9,200
University of Pittsburgh	2	7,250
Washington: University of Washington	1	3,708
Wisconsin: University of Wisconsin	1	1,950
Canada: McGill University	1	3,900
Denmark: University of Copenhagen	1	5,830
Fellows in U. S. Government institutions	1	7,500

These 69 awards are distributed among 14 States and 2 foreign countries.

National Institute of Mental Health teaching grants approved for payment from fiscal year 1951 funds

State and institution	Number	Amount
Grand total	209	$2,415,053
Alabama: University of Alabama	1	12,500
Arkansas: University of Arkansas	1	12,500
California	11	134,214
University of California at Berkeley	5	74,328
University of California at Los Angeles	2	8,856
University of Southern California	2	27,270
Stanford University	2	23,760
Colorado	5	48,819
Colorado Psychotic Hospital	1	10,908
Colorado State Hospital	1	8,000
University of Colorado	2	18,359
University of Denver	1	11,552
Connecticut	7	79,263
Yale University	6	74,713
University of Connecticut	1	4,550
District of Columbia	11	132,417
Georgetown University	1	12,500
George Washington University	2	19,412
Howard University	3	39,705
American Psychoanalytic Association	1	8,000
Catholic University	3	46,320
Washington-Baltimore Psychoanalytic Society	1	6,480
Georgia	3	22,900
Emory University	2	17,900
University of Georgia	1	5,000
Illinois	13	151,567
University of Chicago	4	63,197
University of Illinois	2	18,356
Loyola University	1	12,420
Northwestern University	1	1,944
Association of Psychiatric Facilities of Chicago	1	5,150
Chicago Institute for Psychoanalysis	1	25,000
Elgin State Hospital	1	6,000
Illinois Institute for Juvenile Research	1	8,700
Michael Reese Hospital	1	10,800
Indiana: University of Indiana	2	26,568
Iowa: State University of Iowa	3	32,564
Kansas	6	64,175
University of Kansas	3	31,592
Menninger Foundation	2	26,927
Wichita Guidance Center	1	5,656
Kentucky	5	63,860
University of Louisville	4	54,160
University of Kentucky	1	9,700
Louisiana	8	71,997
Louisiana State University	3	27,361
Tulane University	4	38,636
Guidance Center of City of New Orleans	1	6,000
Maryland	4	$36,946
Johns Hopkins University	3	26,946
University of Maryland	1	10,000
Massachusetts	22	258,868
Boston University	5	84,368
Harvard University	3	50,380
Beth Israel Hospital	1	8,640
Boston Psychoanalytic Society and Institute	1	6,048
Clark University	1	8,424
Habit Clinic for Child Guidance	1	4,032
Judge Baker Guidance Center	2	13,230
Massachusetts General Hospital	1	13,896
Psychiatric Training Facility of Massachusetts, Inc	1	17,388
J. J. Putnam Children's Center	1	8,532
Simmons College	1	11,736
Smith College	2	17,294
Worcester State Hospital	2	15,171
Michigan	6	47,742
University of Michigan	4	32,866
Wayne University	1	12,500
Dearborn Public School	1	2,376
Minnesota	8	80,884
University of Minnesota	7	78,964
Amherst H. Wilder Charity	1	1,920
Missouri	5	68,964
Washington University	4	49,004
Homer G. Phillips Hospital	1	19,960
Nebraska: University of Nebraska	2	18,720
New Hampshire: Dartmouth College	1	1,500
New York	24	308,118
Union College and University	1	12,500
University of Buffalo	1	6,300
Columbia University	5	111,623
New York State University	2	24,920
New York University	4	34,640
University of Rochester	3	37,418
American Association of Psychiatric Social Workers	1	18,360
American Association of Schools of Social Work	1	4,100
Fordham University	1	7,452
National League of Nursing Education	1	15,000
New York Bureau of Child Guidance	1	5,000
New York Psychoanalytic Institute	1	11,500
New York State Psychiatric Institute	1	9,936
Presbyterian Hospital (Babies)	1	9,369
North Carolina	7	85,575
Duke University	3	35,819
University of North Carolina	3	37,256
Wake Forest Bowman-Gray Medical	1	12,500

National Institute of Mental Health teaching grants approved for payment from fiscal year 1951 funds—Continued

State and institution	Number	Amount
Ohio	12	$157,516
University of Cincinnati	4	66,636
Ohio State University	2	19,700
Western Reserve University	5	68,060
Children's Hospital	1	3,120
Oklahoma: University of Oklahoma	1	12,500
Pennsylvania	17	204,837
Hahnemann Medical College and Hospital	1	12,500
Jefferson Medical College	2	25,460
University of Pennsylvania	4	39,246
University of Pittsburgh	3	44,772
Temple University	2	23,732
Woman's Medical College	1	12,312
Institute of Pennsylvania Hospital	1	22,454
Philadelphia Child Guidance Clinic	1	16,189
Philadelphia Psychoanalytic Institute	1	8,047
Wyoming Valley Children's Service Center	1	125
South Carolina: South Carolina State Medical College	1	$6,500
Tennessee	6	75,967
Meharry Medical College	1	12,463
University of Tennessee	2	22,680
Vanderbilt University	3	40,824
Texas	6	63,679
Baylor University	1	11,432
Southwestern Medical School	2	22,000
University of Texas	3	30,247
Utah: University of Utah	1	12,500
Vermont: University of Vermont	1	12,906
Virginia	4	35,320
Virginia Medical College	1	12,500
University of Virginia	1	17,500
Memorial Guidance Clinic	1	200
William and Mary	1	5,120
Washington: University of Washington	4	67,001
Hawaii: University of Hawaii	1	5,666

National Institute of Mental Health traineeship awards approved for payment from fiscal year 1951 funds, by State and institution

State and institution	Number	Amount
Grand total	582	$1,181,527
California	46	84,000
University of California at Berkeley	29	55,000
University of California at Los Angeles	3	4,800
University of Southern California	10	15,600
Stanford University	4	8,600
Colorado	25	46,400
University of Colorado	8	8,400
Colorado Psychotic Hospital	12	30,000
University of Denver	5	8,000
Connecticut	19	43,854
Yale University	12	30,404
Connecticut State Hospital	2	4,000
University of Connecticut	5	9,450
District of Columbia	31	52,200
Catholic University	27	44,600
Howard University	2	3,200
St. Elizabeths Hospital	2	4,400
Illinois	45	93,434
Michael Reese Hospital	5	10,000
University of Illinois	8	18,000
Association Psychiatric Facility of Chicago	3	6,400
University of Chicago	23	47,434
Northwestern University	6	11,600
Indiana	6	0 $11,60
University of Indiana	4	8,000
Purdue University	2	3,600
Iowa: State University of Iowa	4	7,600
Kansas	7	14,000
Menninger Foundation	5	10,000
Wichita Guidance Center	2	4,000
Kentucky: University of Louisville	10	22,230
Louisiana	20	37,200
Tulane University	10	17,200
Louisiana State University	8	12,800
Guidance Center of City of New Orleans	2	7,200
Maryland	17	41,098
Johns Hopkins University	11	27,700
Chestnut Lodge Sanitarium	3	7,677
Sheppard and Enoch Pratt Hospital	3	5,721
Massachusetts	82	189,484
Peter Bent Brigham Hospital	1	3,600
Massachusetts General Hospital	4	12,600
Beth Israel Hospital	2	7,200
Austin Riggs Foundation	5	16,200
Boston College	4	6,400
Boston University	20	40,200
Clark University	2	3,200

National Institute of Mental Health traineeship awards approved for payment from fiscal year 1951 funds, by State and institution—Continued

State and institution	Number	Amount
Illinois—Continued		
Harvard University	9	$23,800
Judge Baker Guidance Center	7	17,300
Psychiatric Training Facility of Massachusetts	5	12,050
J. J. Putman Children's Center	1	3,600
Simmons College	3	4,800
Smith College	15	28,000
Walter E. Fernald State School	1	3,800
Worcester State Hospital	3	6,734
Michigan	8	18,400
University of Michigan	6	14,000
Dearborn Public School	2	4,400
Minnesota	48	86,260
University of Minnesota	46	81,910
Wilder Charity	2	4,350
Missouri: Homer Phillips Hospital	15	23,236
New York	68	146,767
New York University	6	21,600
Columbia University	49	97,706
Rochester University	9	20,261
Fordham University	2	3,200
New York State Psychiatric Institute	2	4,000
North Carolina	17	27,822
Duke University	13	21,422
University of North Carolina	4	6,400
Ohio	24	$49,000
University of Cincinnati	10	24,600
Western Reserve University	7	10,400
Cleveland Guidance Center	2	6,000
Ohio State University	5	8,000
Pennsylvania	71	150,738
Jefferson Medical College	2	4,800
University of Pennsylvania	20	39,100
Institute of Pennsylvania Hospital	11	33,200
Pennsylvania State College	2	3,600
Philadelphia Child Guidance Clinic	6	14,250
University of Pittsburgh	28	51,338
Temple University	2	4,000
Wyoming Valley Children's Service Center Wilkes-Barre		[1] 450
Tennessee: Vanderbilt University	3	6,400
Texas: University of Texas	1	2,400
Utah: University of Utah	2	4,000
Virginia	3	6,200
Memorial Guidance Clinic	1	3,000
William and Mary (R. P. I.)	2	3,200
Washington: University of Washington	8	13,694
Wisconsin: University of Wisconsin	2	3,600

[1] Funds provided to complete payment of trainee, a major portion of whose stipend was paid from 1950 funds.

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Dr. Leo H. Bartemeier (July 1, 1948–September 30, 1952), associate professor, department of psychiatry, Wayne University, Detroit, Mich.; president, American Psychiatric Association (1951–52).

Mr. Barry Bingham (October 1, 1951–September 30, 1955), president and editor, the Courier-Journal and Louisville Times, Louisville, Ky.

Dr. Karl Bowman (July 1, 1947–June 30, 1950), medical superintendent, Langley Porter Clinic; professor of psychiatry, University of California, San Francisco, Calif.; president, American Psychiatric Association (1944–46).

Dr. Ward Darley (October 1, 1951–September 30, 1955), executive dean, health sciences and services, and director, University of Colorado Medical Center, Denver, Colo.

Dr. Alan Gregg (July 1, 1947–June 30, 1950), vice president, Rockefeller Foundation, and formerly director, the Medical Sciences, the Rockefeller Foundation, New York, N. Y.

Dr. Carlyle F. Jacobsen (July 1, 1948–September 30, 1951), executive dean for medical education, State University of New York, Albany, N. Y; president, American Board of Examiners in Professional Psychology (1947—).

Dr. Hugh R. Leavell (October 1, 1950—September 30, 1952), professor of public health practice, Harvard School of Public Health, Boston, Mass., and chairman, executive committee, American Public Health Association.

Dr. David M. Levy (August 1, 1946–August 1, 1948), assistant professor of psychiatry, Columbia University; faculty, Institute of Advanced Studies, Princeton, N. J.

Mrs. Florence Mahoney (October 1, 1950–September 30, 1954), member, board of governors, Menninger Foundation.

Dr. William Malamud (October 1, 1950–September 30, 1954); chairman of department of psychiatry, School of Medicine, Boston University, Boston, Mass.

Mr. Ben May (October 1, 1950–September 30, 1954), businessman, Mobile, Ala.

Mr. Wilson McCarthy (October 1, 1950–September 30, 1951), president, Denver and Rio Grande Western Railroad Co., Denver Colo.

Mrs. Helen E. Meiklejohn (October 1, 1950–September 30, 1951), economist and philosopher, member, Mental Hygiene Society, Berkeley, Calif.

Dr. William C. Menninger (August 1, 1946–June 30, 1949) medical director, Menninger Foundation, Topeka, Kans.; past president, American Psychoanalytic Association (1947–49).

Dr. John Romano (August 1, 1946–June 30, 1949) professor and chairman, Department of psychiatry, School of Medicine, University of Rochester; psychiatrist in chief, Strong Memorial Hospital, Rochester, N. Y.

Mr. Charles Schlaifer (October 1, 1950–September 3, 1953), president, Charles Schlaifer & Co., Inc., New York, N. Y.

Dr. Edward A. Strecker (August 1, 1946–July 31, 1948), professor of psychiatry and chairman, department of psychiatry, School of Medicine, University of Pennsylvania, Philadelphia, Pa.; past president, American Psychiatric Association.

Dr. S. Bernard Wortis (July 1, 1949–September 30, 1953), chairman of department of psychiatry and neurology, New York University Medical College; and director, psychiatric division, Bellevue Hospital, New York, N. Y.

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Dr. Dale C. Cameron (past), Chief, Cooperative Health Service Branch, Division of Industrial Hygiene, Public Health Service; formerly Assistant Director, National Institute of Mental Health, Public Health Service,, and executive officer, United States Public Health Service Hospital, Fort Worth, Tex.; National Research Council Committee on Drug Addiction.

Dr. John A. Clausen, social science analyst, Research Branch, National Institute of Mental Health; member, Social Science Research Council Committee on Fellowships.

Dr. John C. Eberhart, Chief, Research Grants and Fellowships Branch, National Institute of Mental Health; formerly assistant professor of psychology, Northwestern University; member, policy and planning board, American Psychological Association; program committee and commission of the Association for Research in Nervous and Mental Diseases.

Dr. Lawrence C. Kolb (past), consultant in psychiatry, Mayo Foundation; formerly Chief, Research Grants Section, Division of Mental Hygiene, Public Health Service.

Dr. Morton Kramer, Chief, Biometrics Branch, National Institute of Mental Health; fomerly associate in biostatistics, Western Reserve University School of Medicine; adviser, United States delegation to First World Health Assembly.

Dr. Charles C. Limburg (past), research psychologist, Human Resources Division, Department of Air Forces; formerly Chief, Mental Health Statistics Section, Division of Mental Hygiene.

Dr. Wade H. Marshall, physiologist, Research Branch, National Institute of Mental Health; instructor of physiology, George Washington University Medical School; initiated first laboratory at Johns Hopkins Medical School for study of central nervous system by electrical analysis; research on anatomy and physiology on optic pathways in brain.

Dr. Seymour D. Vestermark, Chief, Training and Standards Branch, National Institute of Mental Health; formerly executive officer, United States Public Health Service Hospital, Fort Worth, Tex.; Chief of Services of Neurology and Psychiatry, Ellis Island; instructor in psychiatry, Southwestern Medical College.

MENTAL HEALTH STUDY SECTION

(Current and past members. Dates after names show term of membership)

Dr. Robert B. Aird (July 1, 1951–December 31, 1954), chairman of division of neurology, University of California Medical Center, and director, Electroencephalographic Laboratory, visiting neurosurgeon and visiting neurologist, University of California Hospital, San Francisco, Calif.

Lt. Col. Carlos C. Alden, Jr., USAF (Medical Corps) (ex officio), Department of the Air Force, Headquarters, United States Air Force, Washington, D. C.

Dr. S. Howard Armstrong, Jr. (July 1, 1951–December 31, 1954), chairman, department of medicine, the Presbyterian Hospital, and professor of medicine, University of Illinois School of Medicine, Chicago, Ill.

Dr. Philip Bard (July 22, 1946–June 30, 1951), professor of physiology, Johns Hopkins University.

Dr. John D. Benjamin (July 1, 1951—December 31, 1954), psychiatrist, Child Research Council, University of Colorado School of Medicine, Denver, Colo.

Dr. Barney Brooks (October 7, 1946–August 31, 1948), professor of surgery, Vanderbilt University, Nashville, Tenn.

Dr. Leonard S. Cottrell, Jr. (July 1, 1951–December 31, 1954), social psychologist, Russell Sage Foundation, New York, N. Y.; president, American Sociological Society (1950).

Dr. Kingsley Davis (February 17, 1947–February 17, 1950), director, Bureau of Applied Social Research, Columbia University, New York.

Dr. George L. Engel (February 16, 1949–December 31, 1952), associate professor of psychiatry and medicine, University of Rochester School of Medicine, Rochester, N. Y.

Dr. Eugene B. Ferris, Jr. (October 15, 1946–October 15, 1949), associate professor of medicine, department of internal medicine, College of Medicine, University of Cincinnati, Cincinnati, Ohio.

Dr. Jacob E. Finesinger (July 1, 1950–December 31, 1953), head, department of psychiatry and psychiatrist in chief, University Hospital, University of Maryland Medical School, Baltimore, Md.; chairman, research committee, American Psychiatric Association.

Dr. Francis Forster (July 1, 1951–December 31, 1955), director of department of neurology, Georgetown University School of Medicine, Washington, D. C.

Dr. Jerome D. Frank (July 1, 1951–December 31, 1955), associate professor of psychiatry and psychiatrist in charge, out-patient department, Phipps Psychiatric Clinic, the Johns Hopkins Hospital, Baltimore, Md.

Dr. Thomas French (November 15, 1946–June 30, 1949), associate director, Institute for Psychoanalysis, Chicago, Ill.

Dr. Edwin F. Gildea (July 1, 1950–December 31, 1953), head, department of neuropsychiatry, Washington University Medical School, St. Louis, Mo.

Dr. Roy R. Grinker (September 15, 1946–September 15, 1949), director, Institute for Psychosomatic and Psychiatric Research, Michael Reese Hospital, Chicago, Ill.

Dr. Robert E. Harris (July 1, 1950–December 31, 1955), associate professor of medical psychology and chief psychologist, Langley-Porter Clinic, the Medical Center, University of California, San Francisco, Calif.

Dr. A. B. Hollingshead (July 1, 1950–December 31, 1953), associate professor of sociology, department of sociology, Yale University, New Haven, Conn.

Dr. Charles A. Janeway (October 7, 1946–April 1, 1949), Harvard Medical School; department of pediatrics, Children's Hospital, Boston, Mass.

Dr. George A. Jervis (July 1, 1950–December 31, 1953), director of clinical laboratories, Letchworth Village, Thiells, N. Y.

Dr. David M. Levy (August 1, 1946–June 30, 1951), assistant professor of psychiatry, Columbia University; faculty, Institute of Advanced Studies, Princeton, N. J.

Dr. Kurt Lewin (deceased) (October 1, 1946–February 12, 1947), Massachusetts Institute of Technology Research Center for Group Dynamics, Cambridge, Mass.

Dr. Nolan D. C. Lewis (August 10, 1946–June 30, 1950), director, New York State Psychiatric Institute and Hospital, New York, N. Y.

Dr. Erich Lindemann (September 26, 1949—December 31, 1952), associate professor of mental health, School of Public Health, Harvard University, Boston, Mass.

Dr. Donald B. Lindsley (July 1, 1951–December 31, 1945), professor of psychology, departments of psychology and pediatrics, University of California, Los Angeles, Calif.; president, Midwestern Psychological Association (1951–52).

Dr. Ronald Lippitt (July 1, 1949–December 31, 1952), program director, Research Center for Group Dynamics, University of Michigan, Ann Arbor, Mich.

Dr. Wilmot S. Littlejohn (September 26, 1949–December 31, 1952), associate professor of medicine and neurology, Alabama University Medical College, and medical director, Charlanne School for Cerebral Palsies and Spastics, Birmingham, Ala.

Dr. Margaret Mead (October 1, 1946–June 30, 1951), associate curator of ethnology, American Museum of Natural History, New York, N. Y.

Dr. H. Houston Merritt (September 15, 1946–September 30, 1950), director of neurology, Neurological Institute, New York, N. Y.

Dr. I. Arthur Mirsky (September 15, 1946–September 15, 1949), professor of clinical science, department of clinical science, School of Medicine, University of Pittsburgh; formerly director, the May Institute for Medical Research, and professor at the University of Cincinnati Medical School, Cincinnati, Ohio.

Dr. Grover F. Powers (July 1, 1948–June 30, 1951), professor of pediatrics, Yale University School of Medicine, Children's Clinic, New Haven, Conn.

Dr. Marian C. Putnam (October 7, 1946–June 30, 1949), codirector, the James Jackson Putnam Children's Center, Roxbury, Mass.

Captain G. N. Raines, ex officio, head, Neuropsychiatry Branch, Bureau of Medicine and Surgery, Department of the Navy, Washington, D. C.

Dr. David Rapaport (October 15, 1946–June 30, 1950), research associate, Austen Riggs Foundation, Stockbridge, Mass.

Dr. Fritz Redl (September 15, 1946–June 30, 1949), professor of social work, School of Public Affairs and Social Work, Wayne University, Detroit, Mich.

Dr. Robert R. Sears (September 1, 1950–December 31, 1953), director, Laboratory of Human Development, Graduate School of Education, Harvard University, Cambridge, Mass.; president, American Psychological Association (1950–51).

Dr. Clifford Shaw (February 16, 1949–January 31, 1951), administrative director, the Chicago area project, instructor in sociology and criminology, University of Chicago, Chicago, Ill.

Dr. A. Earl Walker (March 21, 1949–December 31, 1952), professor of neurological surgery, division of neurological surgery, the Johns Hopkins University, Baltimore, Md.

Dr. George R. Wendt (September 15, 1946–June 30, 1951), professor of psychology, Laboratory of Psychology, University of Rochester, Rochester, N. Y.
Dr. Abner Wolf (October 15, 1946–June 30, 1951), associate professor of neuropathology, College of Physicians and Surgeons, Columbia University, New York, N. Y.
Dr. Henry W. Woltman (April 1, 1949–January 15, 1951), chairman, Mayo Clinic sections on neurology and psychiatry, Rochester, Minn.
Dr. Clinton N. Woolsey (July 1, 1951–December 31, 1955), Charles Sumner Slichter research professor of neurophysiology, University of Wisconsin Medical School, Madison, Wis.
Dr. Bernard S. Wortis (October 7, 1946–July 1, 1949), chairman of department of psychiatry and neurology, New York University Medical College; and director, psychiatric division, Bellevue Hospital, New York, N. Y.
Dr. Paul Yakovlev (July 1, 1951–December 31, 1954), clinical assistant professor, Harvard Medical School, and director, Psychiatric Training Faculty of Massachusetts, Boston, Mass.

Mental Health Training Committee

(Current and past members. Dates after names show term of membership)

Dr. S. Spafford Ackerly (August 21, 1946–June 30, 1950), medical director, Louisville Mental Hygiene Clinic, Louisville, Ky.; professor of psychiatry, University of Louisville, School of Medicine.
Dr. Frederick H. Allen (October 1, 1946–June 30, 1949), director, Philadelphia Child Guidance Clinic, Philadelphia, Pa.
Dr. Raymond B. Allen (October 7, 1946–June 30, 1949), president, University of Washington, Seattle, Wash.; at present, chairman of Psychological Warfare Board.
Mrs. Pearl Axelrod (February 28, 1949–December 31, 1952), assistant professor, School of Social Work, University of California.
Dr. Leo H. Bartemeier (July 1, 1947–July 1, 1948), assistant professor, department of psychiatry, Wayne University, Detroit, Mich.; president, American Psychiatric Association (1951–52).
Dr. Walter Barton (April 4, 1949–December 31, 1953), superintendent, Boston State Hospital, Boston, Mass.
Dr. Viola Bernard (July 21, 1950–December 31, 1954), department of psychiatry, College of Physicians and Surgeons, Columbia University, New York.
Miss Elizabeth Bixler (March 1, 1947–June 30, 1951), dean, Yale University School of Nursing, New Haven, Conn.
Dr. C. H. Hardin Branch (January 1, 1951–December 31, 1954), head, department of psychiatry, University of Utah, College of Medicine.
Dr. Warren T. Brown (January 1, 1951–December 31, 1954), chairman, department of neuropsychiatry, Baylor University College of Medicine.
Dr. Ward Darley (February 16, 1948–June 30, 1951), executive dean, health sciences, and services; director, University of Colorado Medical Center.
Dr. Franklin G. Ebaugh (September 15, 1946–June 30, 1949), director, Colorado Psychopathic Hospital; professor and chairman, department of psychiatry, University of Colorado Medical School, Denver, Colo.
Sister Charles M. Frank (July 1, 1950–December 31, 1953), director of nursing education, Incarnate Word College, San Antonio, Tex.
Dr. George E. Gardner (February 16, 1948–June 30, 1951), executive director, Judge Baker Guidance Center, Boston, Mass.; Boston University Medical School, assistant professor of psychiatry.
Miss Anne Garrett (July 16, 1951–December 31, 1954), assistant director, Smith College School for Social Work, Northampton, Mass.
Dr. Merton Gill (September 22, 1950–December 31, 1954), department of psychiatry and mental hygiene, Yale University School of Medicine.
Sister M. Olivia Gowan (April 7, 1947–June 30, 1950), dean, School of Nursing Education, Catholic University of America, Washington, D. C.
Dr. Maurice H. Greenhill (July 16, 1951–December 31, 1955), assistant professor of neuropsychiatry, Duke University School of Medicine, Durham, N. C.
Dr. Donald W. Hastings (September 15, 1946–June 30, 1950), head, department of psychiatry and neurology, University of Minnesota; Chief Psychiatrist, Army Air Force, Washington, D. C. (1944–45).
Dr. Robert G. Heath (July 1, 1950–December 31, 1955), chairman, department of psychiatry and neurology, Tulane University of Louisiana.

Dr. Ernest Hilgard (February 16, 1949–December 31, 1953), executive head, department of psychology, Stanford University.
Dr. Paul E. Huston (July 1, 1951–December 31, 1955), assistant professor of psychiatry, the Psychopathic Hospital, State University of Iowa.
Dr. E. Lowell Kelly (February 16, 1948–December 31, 1952), professor of psychology, department of psychology, University of Illinois.
Dr. Marion E. Kenworthy (October 15, 1946–June 30, 1950), professor of psychiatry, New York School of Social Work.
Dr. Elaine F. Kinder (September 15, 1946–June 30, 1949), director, New York State psychological intern training program; chief psychologist, Rockland State Hospital.
Mrs. Ruth Kuehn (March 1, 1947–June 30, 1950), dean, School of Nursing, University of Pittsburgh, Pittsburgh, Pa.
Dr. Paul V. Lemkau (September 1, 1946–June 30, 1951), director, mental hygiene study, School of Hygiene and Public Health, Johns Hopkins University.
Dr. Maurice Levine (January 1, 1951–December 31, 1952), professor of psychiatry, department of psychiatry, University of Cincinnati Medical School, Cincinnati, Ohio.
Mrs. Bessie Littman (February 13, 1951-December 31, 1952), mental health consultant, National Organization for Public Health Nursing, New York.
Dr. Karl A. Menninger (October 21, 1946–June 30, 1949), Menninger Foundation, Topeka, Kans.
Dr. Hugh J. Morgan (September 15, 1946–January 24, 1948), professor of medicine, Vanderbilt University School of Medicine, physician in chief, Vanderbilt University Hospital.
Dr. O. H. Mowrer (July 1, 1951–December 31, 1955), research professor of psychology, department of psychology, University of Illinois.
Dr. John M. Murray (October 7, 1946–June 30, 1950), professor, Boston University School of Social Work; secretary, American Psychoanalytic Association.
Miss Hildegard Peplau (July 1, 1950–December 31, 1954), instructor in nursing education, Division of Nursing Education, Teachers College, Columbia University, New York.
Miss Lucile Petrey (August 1, 1946–June 30, 1948), Chief Nurse Officer, United States Public Health Service, Washington, D. C.
Dr. Thomas A. C. Rennie (August 10, 1946–September 30, 1950), medical director, Payne Whitney Psychiatric Clinic, New York; associate professor of psychiatry, Cornell University Medical School, Ithaca, N. Y.
Dr. John Romano (July 1, 1949–December 31, 1952), professor and chairman, department of psychiatry, School of Medicine, University of Rochester, New York; psychiatrist in chief, Strong Memorial Hospital, Rochester, N. Y.
Dr. Howard P. Rome (September 15, 1946–June 30, 1950), department of neurology and psychiatry, Mayo Clinic, Rochester, Minn.
Dr. Alexander Ross (July 1, 1950–December 31, 1953), professor of neurology and chairman, department of psychiatry and neurology, Indiana University School of Medicine, Indianapolis, Ind.
Mrs. Elizabeth Ross (September 15, 1946–June 30, 1951), psychiatric social work consultant, Washington, D. C.
Dr. Milton J. D. Senn (June 1, 1949–December 31, 1953), director, Child Study Center, Yale University; professor of pediatrics and psychiatry, School of Medicine, Yale University.
Dr. Lawrance F. Shaffer (October 3, 1946–July 7, 1951), professor, department of guidance, Teachers College, Columbia University, New York.
Dr. David Shakow (September 15, 1946–June 30, 1950), professor of psychology and chief psychologist, Illinois Neuropsychiatric Institute, and professor of psychology, University of Chicago.
Miss Ruth Smalley (January 15, 1951–December 31, 1953), professor of social work, University of Pennsylvania School of Social Work.
Dr. Edward A. Strecker (August 2, 1948–June 30, 1951), professor of psychiatry and chairman of the department of psychiatry, School of Medicine, University of Pennsylvania; past president of American Psychiatric Association.
Dr. Stanislaus Szurek (July 1, 1951–December 31, 1955), director, child psychiatry department, the Langley Porter Clinic, San Francisco, Calif.
Miss Charlotte Towle (November 15, 1946–June 30, 1949), professor, School of Social Service Administration, University of Chicago.
Miss Anna Belle Tracey (February 20, 1947–December 31, 1953), professor of psychiatric social work, School of Applied Social Sciences, Western Reserve University, Ohio.

Dr. John C. Whitehorn (October 7, 1946–November 8, 1948), psychiatrist in chief, Johns Hopkins Hospital; Henry Phipps, professor of psychiatry, Johns Hopkins University School of Medicine, Baltimore, Md.

Mrs. Margaret J. Williams (February 16, 1948–June 30, 1951), assistant professor, George Warren Brown School of Social Work, Washington University, St. Louis, Mo.

Miss Lula K. Wolf (July 1, 1951–December 31, 1955), dean, School of Nursing, University of California Medical Center.

Allocation of grant-in-aid funds for mental health, fiscal years 1951, 1952, and 1953

State or Territory	Allocation, 1951	Allocation, 1952	Tentative allocation, 1953
Alabama	$68,800	$68,600	$68,900
Arizona	20,000	19,200	19,200
Arkansas	47,900	43,000	42,700
California	190,000	184,200	186,800
Colorado	23,800	24,500	24,900
Connecticut	37,400	35,400	35,400
Delaware	20,000	19,200	19,200
District of Columbia	20,000	19,200	19,200
Florida	50,500	54,400	55,300
Georgia	72,700	74,100	74,200
Idaho	20,000	19,200	19,200
Illinois	154,100	154,300	153,400
Indiana	79,200	73,800	73,600
Iowa	54,700	49,400	49,000
Kansas	39,300	36,400	36,100
Kentucky	67,400	64,000	64,100
Louisiana	58,400	56,700	56,400
Maine	20,000	19,200	19,200
Maryland	40,600	42,800	43,200
Massachusetts	88,700	85,600	85,100
Michigan	119,800	116,500	116,400
Minnesota	60,100	57,000	56,700
Mississippi	55,500	52,600	52,800
Missouri	79,200	75,300	74,600
Montana	20,000	19,200	19,200
Nebraska	26,200	24,900	24,800
Nevada	20,000	19,200	19,200
New Hampshire	20,000	19,200	19,200
New Jersey	90,400	86,100	86,300
New Mexico	20,000	19,200	19,200
New York	249,700	256,600	257,200
North Carolina	89,600	88,300	87,900
North Dakota	20,000	19,200	19,200
Ohio	150,200	144,800	144,700
Oklahoma	51,400	46,000	45,300
Oregon	32,500	27,300	28,000
Pennsylvania	206,900	193,200	193,300
Rhode Island	20,000	19,200	19,200
South Carolina	48,500	47,500	47,400
South Dakota	20,000	19,200	19,200
Tennessee	71,300	70,300	70,600
Texas	156,400	152,100	150,800
Utah	20,000	19,200	19,200
Vermont	20,000	19,200	19,200
Virginia	65,700	66,900	66,900
Washington	46,900	43,200	43,000
West Virginia	42,900	41,100	41,000
Wisconsin	66,400	64,100	64,000
Wyoming	20,000	19,200	19,200
Alaska	20,000	19,200	19,200
Hawaii	20,000	19,200	19,200
Puerto Rico	56,900	53,400	53,600
Virgin Islands	20,000	19,200	19,200
Total	3,200,000	3,100,000	3,100,000

Mr. DENTON. There was an article in the newspaper that criticized some of the research activities this group has. When Dr. Scheele was on the stand, Mr. Busbey brought up a number of them. One was about a professor at Northwestern making an investigation on why people married, and there was an investigation of some religious sect in Canada, and about Indians chewing some kind of a weed now in New Mexico.

We will probably hear a good deal about that when this bill gets to the floor. Would you tell us something about those projects?

STUDY OF THEORY OF COMPLEMENTARY NEEDS

Dr. FELIX. I would be happy to, Mr. Denton. Suppose I start with the one at Northwestern.

A scientist out there by the name of Dr. Winch, as a result of studies over a number of years, has developed a new procedure for testing a theory known as the theory of complementary needs.

Now, this is a theory which states in effect that people, in order to have the best relationships with each other, the most smoothly functioning relationships in business, in any kind of an activity, or in the home, where there is any possibility of selection—self-selection or someone else selecting for them—get along better when these people have personalities such that the weak spots in one person's personality are complemented by the strong spots in another person's personality, thereby making a more strong unit.

He has been studying this in relationship to such things as selection of bomber crews and submarine crews and similar things of that nature, and finally found that when he is working with large groups—say 5 or 6 or 10 people, which is large in a study like this—the combinations and permutations are so fantastically great that you cannot deal with them. There are all of the personality aspects of each person in relation to all the other people. You can see what that amounts to.

So he hit upon the idea that the smallest group with which one can deal is two, and that one which was ideal for study would be one in which it was entirely self-selection and in which the selection was made with the idea in view of a long-time relationship. Well, marriage is the best example of that. It is a self-selection process with the intention of this lasting for life when it is made.

Further than that, there is no relation between two people in which there is such a wide spectrum of the personality which is brought to bear upon the total situation as is true in married couples.

He therefore got a group of about 400 young married couples to volunteer for personality studies, to see whether or not this theory is true—that their personalities complemented each other.

Let us say, to give an example, one person is rather irresponsible where money is concerned and one is quite businesslike, and that these two complementing one another tend to eliminate one area of difficulty in the home because the finances stay on a pretty even level if there is good give and take. That is just one example.

The experimenter is working with these married couples to test a theory, and these couples are just simply the best single medium in which to work at this time.

Mr. DENTON. How does that relate to mental health?

Dr. FELIX. We know that one of the great causes of difficulty in individuals is what we call a breakdown in interpersonal relationships. Interpersonal relationships means the relationship I have to you and that you have to me, the way I affect you and you affect me, whether it is a congenial one or an irritating one, or anything in between those two extremes.

Over a period of time there tends to develop in uncongenial relationships what we used to call, out in the mountains, cabin fever. Cabin fever is a name given to something that happened when the old prospectors used to go out, two or three of them, and they would hole up for the winter in a cabin and would be snowed in and did not see anybody else. Sometimes one would come out in the spring and sometimes one or two would not come out. They would be up under a tree some place resting in peace.

Living in that close relationship over a long period of time, if they were uncongenial, finally their patience wore so thin that something happened.

Over a long period of time, or maybe not so long in some cases, this lack of congeniality and the irritation caused therefrom must find expression of some kind. Well, we cannot go around killing each other so we bottle this up and it gnaws away at us until finally it finds its expression in abnormalities in behavior other than violence; disturbed personalities and so forth.

There was a book that came out recently, a story of one of the ships during the last war in which this poor interpersonal relationship finally resulted in almost a mutiny on this particular ship. So this inability to (1) get along and (2) express it in such a way as to really get the steam off, results in abnormalities in behavior and in thinking and in many cases leads to mental illness.

Does that explain it, or should I go further?

Mr. DENTON. I believe it does.

STUDY OF RELIGIOUS SECT USE OF PEYOTE

Dr. FELIX. Now the peyote. There developed in the late nineteenth century in the Southwest a religious sect known as the Native Church. This was a sect among not only the Navajos, but a number of the other Southwest Indians which was a form of Christian religion. One form of the religious observance was periods of fasting, prayer, and communion with the Great Spirit.

As a part of this ceremony, these individuals chewed a part of the cactus plant known as the button, which is called peyote, the active principal of which is mescal, a drug which produces hallucinations in the people who take it.

They would take one or two of these at the start of the ceremony and as the night wore on they might take more as they wished and this would allow them, as they thought, to communicate with the Great Spirit.

Now, there were not so many of this sect until beginning in about 1930 there began to be quite an upsurge of this particular religious cult.

Dr. Eberle, who has been working with this, found that the upswing was releated to three things: In direct proportion to the length of time the church had been in existence in this particular group; in direct proportion to the amount of group tension in the group, social and emotional tension; and in inverse proportion to the degree of what he called secularization which means, for instance, when they were sick, instead of calling in the witch doctor to dance, they would call a physician.

We were interested in this because under the Public Health Service Act, section 2, I believe it is, under the definition of narcotic and habit-forming drugs, peyote is listed as one of the narcotic and habit-forming drugs and under the law we are charged among other things with investigating the habit-forming and narcotic drugs, their use and their deleterious effects.

Now, the use of this drug even as a religious rite is said to be related to the degree of tension and maladjustment in the community. Then it becomes important to know (*a*) what the real background is of this particular cult, (*b*) why they use the drug and what the effect on the people is, and that is the basis of our grant to Dr. Eberle, to study what they call peyotism, or the use of peyote in this religious festival among these Indians.

Does that describe that sufficiently for you?

STUDY OF EFFECTS OF STRESS ON YOUNG AND OLD

Mr. DENTON. Yes.

As I understand, one of them was "why a kid will bleat more while he is away from his mother."

Dr. FELIX. I described that in part at least last year at the hearings when I spoke about the twin goat kids and how they would take one from the mother and leave one with the mother and they would stimulate these two the same way with electric shocks and loud noices and blasts of air and one would bleat and run around and cuddle up with the mother and did not seem to be too affected by it. The other would assume a rigid position and after a week or 10 days would die.

Upon autopsy of these little fellows who died, they were dehydrated; they stopped eating and the intestines were clamped down and spastic. They had died of chronic fright, this fright being overwhelming and the only difference was, there was no opportunity for comfort or relief of fright by some figure of security, in this case the mother goat.

Now, Dr. Liddell has gone on further than that. He is interested in two things: What do these stressful situations mean to young as contrasted to old? In the final analysis he wants to know about human beings, but you cannot subject human beings to these things and, as I said before here today, we know there are certain laws—we can say laws instead of theories now—of behavior and learning which are equally applicable to lower animals and to human beings. This falls within that category.

Now, he has gone further than that. In fact, I might have reported as one of the developments in the last year, Dr. Liddell at Cornell found that he can take these goats and subject them to shocks—after this nursing period, when they are not babies any more but rather adolescents, subject them to electric shocks and other stimuli every 2 minutes. They will develop the same pattern as the little goats away from the mother except they do not die, but their respirations become gasping, they are rigid and they cut down on their eating and their excretory functions almost stop for a period of time.

After he has given them these experiences and has conditioned their responses, if he turns them out in the pasture for as long as 3 years these goats, without the stimulation, still behave as they did in the experiment.

Now if, however, he gives the stimulus 6 minutes apart instead of 2 minutes apart, they develop very abnormal patterns, but it is different. The first you might say is comparable to a psychosis. The second group becomes extremely nervous; they twist their heads; they jerk and thresh about; their bladder and bowel movements are much more frequent and copious; they are, you might say, highly neurotic animals.

If he now turns those out in the pasture—and follows them for a number of years, he has found that 3 years later they show that same pattern and no kind of reconditioning he has found yet will alter that pattern.

He has found two other things. He has found if he takes these twin goats, removes the thyroid gland here in the neck from one and not from the other, the one with the thyroid gland removed will not develop these symptoms and the one with the intact thyroid gland will.

Now, I do not know why. This is a finding, and that is all that I can say to date.

Further, he has found that if he removed the frontal lobes from the brain of these goats who have been this way for several years out in the pasture, they immediately clear up. That is the only thing he has found that will clear them up.

Now, these are all parts of this same experiment which is being carried on under this grant which has been going on now for about 4 years under our support.

Mr. DENTON. In the interest of time, would it not be better just to put a statement in the record on the last item? It would be all right with me, if you just furnished a statement on that.

Mr. FELIX. I would be glad to put a statement in the record on that.

(The statement referred to is as follows:)

MENTAL HEALTH OF HUTTERITES

The fourth project which has received attention was one entitled "Cultural and Psychiatric Factors in the Mental Health of the Hutterites." This project is being conducted by Dr. Joseph W. Eaton, of Wayne University, Detroit.

Perhaps the best description of the Hutterites that could be given to this committee is one contained in an aricle published by Dr. Eaton describing the project. Dr. Eaton says: "They are a folk culture with strong common religious and cultural traditions, close family ties, a common language, and four centuries of common history. They now number about 8,700 people who live in 93 communal agricultural villages called colonies. Each colony is a separate economic unit, composed of a large farm and related service enterprises. The average colony has about 14 families, with a population of about 95. When a colony gets much larger, it buys new land to set up a branch colony. Each colony has one or two lay preachers who are spiritual leaders, a manager, called boss, who is in charge of economic affairs, and a board of directors of older male members. Most male adults are managers of one of the many diverse departments. The present colonies are located in southeastern South Dakota, Montana, and North Dakota, in the United States; and in Manitoba and Alberta in Canada.

"The Hutterites are largely of south German and Swiss ethnic descent. The sect originated in 1528 as one of the earliest Anabaptist dissidents from the Protestant Reformation. Its followers were severely persecuted by the ruling Protestant and Catholic Church authorities. Hutterite history is filled with accounts of ghastly atrocities which during several periods brought the sect close to physical extinction. As devout pacifists, the Hutterites had only one possible defense—migration. Their odyssey took them through Hungary and Rumania, until, in 1770, they were offered asylum in Russia. There they lived in separate villages until, under Czar Alexander II, the Russian Government

demanded that the Hutterites adopt a policy of Russification in their schools and do military service. The sect reacted by migrating to the United States between 1874 and 1877.

"Religion is a major cohesive force in this folk culture. The Hutterites consider themselves to be a people chosen by God to live the only true form of Christianity. Like the Mennonites and other Anabaptist sects which are similar to Hutterites, they believe in adult baptism, and they emphasize simplicity in every aspect of living.

"The Hutterites are distinguished from all other Protestant and Anabaptist sects by their belief in economic communalism—but Christ, not Lenin, is their apostle. They believe private property to be sinful; they are certain that salvation can be obtained only by living in a community and sharing all earthly goods with one's brethren, as did Christ and his apostles. The whole group prepares and eats its meals together. Many aspects of child education and discipline are not family functions; yet family ties are very important and compete with community ties for the loyalty of members."

It has been claimed that symptoms of emotional maladjustment, such as divorce separation, strong family conflict, crime, juvenile delinquency, psychoses and neuroses are found in smaller numbers among the Hutterites than in other segments of our society. It has also been claimed that the recovery rate of those who are mentally ill appears to be higher than in other segments of our society. These claims have not been verified but have been repeated frequently enough to attract attention. Dr. Eaton proposes to do two things: first, to determine the incidence of emotional disorders in this small, rather socially isolated population, to learn if there is more, less or the same amount as is found elsewhere. If it is found that the incidence is greater or less than the rest of our population, he then proposes to study this group of people very carefully from many social, psychological, and anthropological points of view to try to find factors contributing to this deviation, plus or minus, from the rest of the country. His objectives here are the same as those of any scientist whose attention is drawn to a suspected increase or decrease in the frequency of a disease in any particular group of people. This study is then a study of the epidemiology of mental disorder, and the techniques will be similar also, but of course not identical to, the techniques that would be employed in determining the reasons for an increase or decrease in the incidence of cancer of the stomach, let us say, or tuberculosis, or heart disease or malaria or typhoid fever in a relatively small self-contained population group.

GRANTS TO STATE UNIVERSITIES

Mr. DENTON. Do you give money to the State universities for teaching?

Dr. FELIX. Yes, sir.

Mr. DENTON. How much does each State university get—$25,000 from Cancer and $15,000 from Mental Health?

Dr. FELIX. Not all of them. Some do not participate in this. We only have 42 of which part are State universities.

Dr. TOPPING. There are three teaching grants: $25,000 is the maximum in the Cancer Institute for the teaching of cancer; $15,000 is the maximum from the Mental Health Institute for the teaching of psychiatry and mental illness, and I believe $14,000 is the maximum to any one individual medical school for the better teaching of cardiovascular disease.

The Cancer Institute covers all the medical schools with a grant to each of them, Mental Health has 42 medical schools that have grants, and the Heart Institute has 42 institutions.

PROBLEM OF CARE FOR ELDERLY PATIENTS

Mr. DENTON. I remember when I used to visit insane hospitals in my State, it seems to me most of the inmates were old people. More of them were senile than anything else. I remember the superintend-

ent used to say that what they needed was just institutional care. They were just old and their arteries were hardened and if they had somebody to take care of them they would be all right, but these people had no one to take care of them.

Now, I do not suppose there is any solution you can offer to that problem, is there?

Dr. FELIX. First, Mr. Denton, the largest proportion of State hospital patients are not seniles. The largest single percentage are dementia praecox patients—40 percent. I have forgotten the senile percentage, and I would hesitate to even say on the record because I am not sure, but it is considerably less than that.

Yes, there is something we can do for these elderly patients, unless they are completely delapidated, that is, their arteries are so hardened that their brain is essentially destroyed.

Many of these people can be cared for under a system which is called a family care system, in which the patient may not go to his own family, but is placed in a home supervised by the State mental health authority, in which he lives comfortably, is looked out for, is cared for, the home is checked periodically by the State authorities, and the patient carries on such functions as he can.

As the patient gets older and his arteries harden more and more, of course, he will not be able to stay outside, but an interesting thing is that the average length of stay of all patients in mental hospitals is 8 years. That is taking everything that comes in. But the average length of stay of seniles is 3 years and a fraction and they go out by death. It is the most rapid turn-over group. They only live in the hospital about 3½ years before they die.

RATES OF ADMISSION TO HOSPITALS OF PATIENTS FROM RURAL AND URBAN AREAS

Another interesting thing—and I had intended saying this since I think the question was asked of Dr. Scheele, and I understood I was to give some answer on it; one of the gentlemen of the committee asked it: the rate of admission to hospitals from rural and urban areas. The rate in urban areas is double that in rural areas. The rate is 68 and a fraction per hundred thousand in urban areas and 34 and a fraction in rural areas, and the cut-off point is another interesting thing. The cut-off point in population is between 2,500 and 10,000. Whether it is 10,000 or 5,000,000, it does not seem to make much difference, but it is i nthat transition from the farm, guess you would say, to the town.

Now, one of the reasons for this is the inability of families in urban communities to care for elderly, partially helpless, and mentally dilapidated relatives in apartment-house life or in a small-living unit life in a city, as they could in the old days back on the farm where they had lots more freedom and much of their behavior could be better tolerated.

I have gone a long way about to answer your question.

Mr. DENTON. I think that is all.

Mr. FOGARTY. Mr. Schwabe?

EXPLANATION OF SCHIZOPHRENIC

Mr. SCHWABE. Doctor, will you tell us for the record, please, what is the schizophrenic classification of mental illness?

Dr. FELIX. The word "schizophrenic" is used frequently in the singular. It should be used in the plural. It seems that category is made up of several different diseases. The true word should be "schizophrenias." We do not do that however, to avoid confusion.

In general, the onset is in early life, from the late teens on to at least the early thirties. The disease is chronic, progressive, and leads to deterioration without any impairment of the length of life. The symptoms principally are a withdrawal of the person, as it were, into himself, a lack of ability to communicate with others.

Mr. SCHWABE. Sometimes he even has to be fed, does he not?

Dr. FELIX. That is correct. He sometimes has to be tube-fed. He is very fascinating to the psychiatrist as there are profound changes in his thinking, so that impressions that come to him by word or by what he sees are misinterpreted.

The classical example is one given in one of the textbooks in which a schizophrenic patient was asked, "Who was Caesar?" And his answer was that Caesar was an Italian.

Now, Rome is in Italy, but in the time of Caesar it was Rome the empire and not Italy the country.

These slight errors in the beginning become profound later—I could spend the rest of the afternoon giving examples of this. There are also errors in association—that is, for example, when you see a certain thing you usually associate it with some idea so that if you see a pencil you associate it with writing. If you see a cigar, you associate it with smoking, and so forth.

In the schizophrenic patient there are profound errors in association which lead to bizarre behavior—sometimes very undesirable behavior and violent behavior.

Sometimes they make up their own vocabulary and use an entirely different language which is utter jargon to anyone else.

Mr. SCHWABE. It is not confined exclusively, though, to this youthful area that you have described?

Dr. FELIX. No, sir. I have seen them start in the forties, but they are not as common.

Mr. SCHWABE. What would you say roughly may be the percentage of mentally ill people who fall into this classification?

Dr. FELIX. Well, judging from our hospital data, which is the best information we have—and I wish the record to show that this is an educated guess and not a fact—I would say 40 percent, plus or minus a few percent.

STUDY OF PATHOLOGICAL DISORDERS OF CHILDREN

Mr. SCHWABE. What is the next larger group among those who are mentally ill?

Dr. FELIX. Do you wish to exclude the senile mentally ill from that, Mr. Schwabe?

Mr. SCHWABE. I think you might just as well because you have mentioned those, and that is the group we just commonly speak of as being old and mentally feeble without being violent as a rule, and so forth. Is that not right?

Dr. FELIX. Yes, sir.

Mr. SCHWABE. Just the old-age group.

Dr. FELIX. Then the next most frequent, I believe one would say are the pathological behavior disorders of children.

Mr. SCHWABE. What are we doing about that group?

Dr. FELIX. One whole segment of our research grant program is devoted to study of child development, normal and abnormal, and to the development of new treatment procedures for psychotic and emotionally disturbed children.

You may remember I spoke of this case-finding technique which will identify these children in younger years.

Mr. SCHWABE. Is that what you are emphasizing at Phoenix, Ariz., at the place that you have out there?

Dr. FELIX. Yes, sir. We want to know about the stresses and other things.

SOCIOLOGICAL STUDIES

Mr. SCHWABE. I visited that a month or so ago and I would like you to tell us just briefly what you hope to accomplish there. It is the only one of its kind in the country?

Dr. FELIX. There are several others which are similar, but it is the only one exactly like this. They are studying other things.

Mr. SCHWABE. You have quarters in the University of Phoenix?

Dr. FELIX. Yes, sir.

We have been interested for many years and have never had an opportunity to study what effect what we call low-grade stress, chronic, low-grade stress, hitting the individual all his waking days, day in and day out over the years, has on his later physical and mental health. We are interested in the effects of the tensions that people undergo because of their position in a society and how they react to it. From the time they are very young until the time they die, that is, on the development of mental disorders and physical disorders.

Conversely, we are interested in what the tensions of the so-called nonminority group have on their lives, physical and mental.

You know, of course, in many people it is just as stressful to keep up with the Joneses, if they are in the Joneses' class, as it is to wish they were with the Jonses when they were in another class several echelons below.

Are there certain types of behavior manifested in these children which will be indicative of future sickness which this kind of stress is producing? Are there certain kinds of physical conditions?

I do not want to steal my colleague's thunder in heart and cancer and all the rest, and this is their province more than mine, but I will use this as an example: Are there certain classes of people who are more susceptible to what is known as coronary diseases or the blockage of one of the arteries that supplies the heart than are other kinds of people? I do not know, but I would very much like to know.

There are a lot of ramifications to it, as they probably told you down there, Mr. Schwabe. This is generally what we are studying—what happens in a community as it boils and turns over?

Interestingly enough in Phoenix, certain areas of the city which are not the part which the guides show the tourists are moving, and is an area of extreme unrest. I mean they are not rioting, but there is a

lot of emotional unrest, as this undesirable area moves into the desirable area. This fringe area is one of the things of particular interest to us. It is going to be of interest to a lot of people in this country—city planners and others. As cities tend to grow up, they tend to decay in the centers. You may have read some of the articles in one of the local papers on Washington. They tend to decay at the center socially and grow at the periphery.

We know from studies done in many cities that in this center—not in the epicenter, but in this center as it moves out around the edges—is where we have the highest incidence of crime, mental disease, and juvenile delinquency.

Mr. SCHWABE. That is where they are too far out for business and not far enough out for residence?

Dr. FELIX. That is right.

Mr. SCHWABE. And the sociologists have been giving a lot of study to it, too.

Dr. FELIX. Yes, sir; that is correct.

Mr. SCHWABE. That is primarily what you are leveling at down there, at that little installation; is that right?

Dr. FELIX. That is correct, sir.

Mr. SCHWABE. You say you have some other similar installations or programs?

Dr. FELIX. We do not, no. This is the only one. There is one not identical, but it dovetails with this which is being carried on under the auspices of Harvard University in Wellesley, Mass. There is one being carried on by another group.

Mr. SCHWABE. Those are more sociological studies in the department of sociology, or under their supervision?

Dr. FELIX. That is correct, sir.

Mr. SCHWABE. There is one that is in the department of psychology in one of the schools and I think they collaborate sometimes with the department of sociology on it.

Dr. FELIX. That is correct; yes, sir.

EFFECT OF BAR HARBOR LABORATORY FIRE

Mr. SCHWABE. You spoke of these mice up at Bar Harbor. When I was up there I found a lot of them were destroyed in that fire and they lost a lot of what otherwise might have become valuable for information and records.

Dr. TOPPING. In relation to that, I would like to say that perhaps the first construction grant made under the Cancer Institute was to the Bar Harbor laboratories to replace the building destroyed by the fire, and the Cancer Institute also shipped them a great number of species of mice that had been lost in the fire that we had gotten from them, so that they could start their stock again.

FURTHER REFERENCE TO DRUG ADDICTION STUDIES

Mr. SCHWABE. Then with reference to this drug addict institution down at Lexington, I went into that the other day a little bit with one of the other gentlemen, but barbiturates are giving you quite a bit of trouble down there, are they not? Those people are not exactly like your morphine addicts and so forth. They seem to be more like alcoholics than the ones who use the opium derivatives.

Dr. FELIX. That was my impression as I expressed it a while ago.

Mr. SCHWABE. With relation to their withdrawal from the drugs to which they are addicted, you have not gotten to the point of telling us about cures yet, have you, except just in a preliminary way?

Dr. FELIX. You are speaking of narcotic addiction now?

Mr. SCHWABE. Yes.

Dr. FELIX. It is a complicated picture. It is a sociological, psychiatric and physiological problem. They are all tangled up together. The more we find out, the more we find we do not know.

VALUE OF DRUG ADDICTS ANONYMOUS

Mr. SCHWABE. I referred the other day to the Drug Addicts Anonymous group. I have been impressed with the good they have been doing, but we do not have enough chapters or societies or groups for them to find asylum when they get out.

When they get out into society, they have nowhere to go and get solace from colleagues or those who have had a similar experience.

Is that not about the worst trouble with Addicts Anonymous? So far, that is. You cannot tell just how far it will go until you have sufficient chapters for them to attend.

Dr. FELIX. That is correct.

Mr. SCHWABE. Does it not offer some promise, though, if we are to treat it as being somewhat analogous at least psychologically to alcohol?

Dr. FELIX. That is correct. The first chapter was started at the hospital there.

Mr. SCHWABE. There is still a chapter there of two or three hundred members.

Dr. FELIX. Yes, sir.

Mr. SCHWABE. And there is another one some place in Kentucky, I believe.

Dr. FELIX. I believe it is at Louisville, is it not?

Mr. SCHWABE. Louisville, I believe. You have no chapters in Chicago or New York that I have heard of, where perhaps they are more needed than they might be at Louisville, for instance. Is that not right?

Dr. FELIX. I think that is correct.

Mr. SCHWABE. Is anything being done to encourage the organization of additional chapters in these larger centers from which your addicts originally came in larger numbers, perhaps, and to which they may normally be expected to go after they leave the institution?

Dr. FELIX. Of course, as you know, Addicts Anonymous is an organization in which a person must freely and willingly and voluntarily enter, just as with Alcoholics Anonymous.

Mr. SCHWABE. It also has religious and sentimental background.

Dr. FELIX. Those who belong to the Addicts Anonymous while they are patients there, we try to get them to do missionary work where they go.

Mr. SCHWABE. I mean you are lending encouragement, are you not, to at least give it a fair trial?

Dr. FELIX. Oh, yes, sir. We are that. We give them no financial support.

Mr. SCHWABE. Of course not. That might thwart the very purpose.
Dr. FELIX. That is right.
Mr. SCHWABE. Mr. Chairman, I have nothing further.

HOUSING PROGRAM FOR PERSONNEL AT BETHESDA

Mr. FOGARTY. Dr. Sebrell, I did not ask you this morning about your building program for your personnel at Bethesda, so will you get us for the record just what has happened this year and what the needs are in that building program?
Dr. SEBRELL. Do you mean the housing program?
Mr. FOGARTY. Yes.
Dr. SEBRELL. Yes, sir; I will be glad to submit that for the record.
Mr. FOGARTY. I would like to have what has been appropriated and details similar to those submitted last year.
Dr. SEBRELL. It is now planned to be an 80-unit apartment house, and I will be glad to submit the details for the record.
Dr. TOPPING. The status, Mr. Chairman, is, roughly, this: That the plans are with the Building Administration and will probably be ready to go out for the contract about in March.
The money that was appropriated in the third stage of the construction of the clinical center has been made available for that construction.
Mr. FOGARTY. That is only for 80 units.
Dr. TOPPING. That is correct.
As I recall, it is $1,025,000. There is in this budget $20,000 for the cost of the upkeep of that housing, which will be available in the fiscal year 1953, in the fourth quarter.
(The additional information requested follows:)

The 1951 appropriation carried an authorization of $1,375,000 for construction of stage III of the clinical center project. Of this, $1,105,000 was to be made available for apartment units on the grounds of the National Institutes of Health. When the clinical center is in operation, it will be essential for certain personnel to be housed at the NIH in order to be available for emergencies. These will be medical and nursing personnel and certain others in the administrative and plant operations areas. Two hundred and fifty units have been requested by the National Institutes of Health as the minimum which are needed to assure successful operation of the clinical center. The Public Buildings Service had estimated that the available funds would provide only 60 of the 250 units needed. Last year the National Institutes of Health explored with the Bureau of the Budget and the Congress the possibility of having the 250 units built and operated by private contractors on Government-leased land. Pending congressional action on a proposed appropriation language change which would authorize this, the Bureau of the Budget placed the funds in reserve. Although the plan received Senate approval, it lost in the conference committee, which decided that the housing should be constructed by the Government.

For fiscal 1952 the National Institutes of Health submitted to the Bureau of the Budget a request of $2,350,000 to complete and furnish the original plan of 250 units. This estimate was not included in the President's budget. It also requested the Public Buildings Service to design an apartment building with the maximum number of units within the available $1,105,000 and to use, insofar as possible, prevailing specifications for privately built housing. This has resulted in an 80-unit apartment building providing 49 efficiency, 26 one-bedroom, and 5 two-bedroom units. Final drawings are well advanced and a contract is to be let late spring. Occupancy of the 80-unit building is expected about March 1, 1953, if there are no construction delays.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

Dr. FELIX. I do not, Mr. Chairman. Thank you very much for allowing me to appear before you.

Mr. FOGARTY. Thank you, Doctor.

FRIDAY, FEBRUARY 1, 1952.

NATIONAL HEART INSTITUTE

WITNESSES

DR. C. J. VAN SLYKE, DIRECTOR, NATIONAL HEART INSTITUTE
DR. NORMAN TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$14,200,000	$10,000,000	$9,749,000
Proposed supplemental due to pay increases		97,000	
Applied to contract authorization	−5,344,854		
Total available for obligation	8,855,146	10,097,000	9,749,000
Unobligated balance, estimated savings	−358,360		
Obligations incurred	8,496,786	10,097,000	9,749,000
Comparative transfer from—			
"Operating expenses, National Institutes of Health, Public Health Service"	200,000		
"Salaries, expenses, and grants, National Cancer Institute, Public Health Service"	200,000		
Comparative transfer to—			
"Operations, Federal Civil Defense Administration"	−600,000	−800,000	
"Assistance to States, general, Public Health Service"	−25,507	−30,000	
"Control of communicable diseases, Public Health Service"	−54,527		
Total obligations	8,216,752	9,267,000	9,749,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Grants:			
(a) Grants for research and training:			
(1) Research projects	$4,127,479	$4,009,000	$4,000,000
(2) Research fellowships	314,895	300,000	300,000
(3) Expansion of teaching of medical subjects relating to heart diseases	[1] 735,854	741,000	741,000
(4) Training stipends	[1] 157,150	150,000	150,000
(b) Grants for detection, diagnosis, and other control activities	1,359,385	1,500,000	1,500,000
2. Direct operations:			
(a) Research	1,734,635	1,909,000	2,466,300
(b) Other direct operations:			
(1) Review and approval of research and training grants	67,652	76,700	76,700
(2) Technical assistance to States	366,098	346,000	280,000
(3) Administration	239,458	235,300	235,000
Total funds for program performance	9,102,606	9,267,000	9,749,000
Adjustment for obligations incurred in advance of program performance	−885,854		
Total obligations	8,216,752	9,267,000	9,749,000

[1] Some of the obligations for teaching grants and training stipends were incurred 1 year in advance of program performance and were paid from liquidating cash. By means of the adjustment line shown in this schedule, the amounts by activity reflect actual performance levels for each year.

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	360	353	366
Full-time equivalent of all other positions	10	8	7
Average number of all employees	301	324	344
Average salaries and grades:			
General schedule grades:			
Average salary	$3,824	$4,246	$4,235
Average grade	GS-5.8	GS-5.8	GS-5.8
Crafts, protective, and custodial grades:			
Average salary	$2,455	$2,641	$2,618
Average grade	CPC-3.2	CPC-2.5	CPC-2.5
Ungraded positions: Average salary	$5,981	$6,678	$10,053
01 Personal services:			
Permanent positions	$1,312,537	$1,523,797	$1,627,937
Part-time and temporary positions	44,132	38,435	34,940
Regular pay in excess of 52-week base		4,028	4,348
Payment above basic rates	4,338	4,100	3,900
Total personal services	1,361,007	1,570,360	1,671,125
02 Travel	68,339	79,590	81,770
03 Transportation of things	6,887	6,350	11,765
04 Communication services	10,218	10,840	10,080
05 Rents and utility services	5,076	5,100	5,100
06 Printing and reproduction	14,501	9,320	9,300
07 Other contractual services	53,145	108,950	150,700
Reimbursement to "Operating expenses, National Institutes of Health, Public Health Service"	318,423	445,240	782,940
08 Supplies and materials	308,893	168,540	172,450
09 Equipment	261,044	160,540	160,220
11 Grants, subsidies, and contributions	5,808,989	6,700,000	6,691,000
15 Taxes and assessments	1,670	3,610	3,990
Subtotal	8,218,192	9,268,440	9,750,440
Deduct charges for quarters and subsistence	1,440	1,440	1,440
Total obligations	8,216,752	9,267,000	9,749,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$6,725,349	$4,217,124	$1,208,850
Obligations incurred during the year	8,496,786	10,097,000	9,749,000
Subtotal	15,222,135	14,314,124	10,957,850
Deduct:			
Unliquidated obligations, end of year	4,217,124	1,208,850	1,242,030
Adjusted in obligations of prior years	76,719		
Total expenditures	10,928,292	13,105,274	9,715,820
Expenditures are distributed as follows:			
Out of current authorizations:			
Out of appropriations to liquidate prior-year contract authorization	2,163,129		
Out of new obligational authority	7,677,555	9,070,000	8,810,000
Out of prior authorizations	1,087,608	3,954,094	900,000
Out of anticipated 1952 supplemental for pay increases		91,180	5,820

Mr. FOGARTY. The committee will come to order.

The committee has before it this morning the National Heart Institute. Dr. Van Slyke, do you have a statement for the committee?

GENERAL STATEMENT

Dr. VAN SLYKE. Mr. Chairman, I do not have a prepared statement, but I should like to offer some remarks more in the nature of an annual report to the committee on what has happened since the last time I had the privilege of appearing before you.

As you know, the Heart Institute activities are broken down into a series of items, and I should like to mention each of those items rather briefly.

TECHNICAL ASSISTANCE TO STATES PROGRAM

In the item referred to in the budget as "Technical assistance to States," we conduct, in cooperation with the Division of Chronic Diseases and Tuberculosis, a series of demonstration activities dealing with the control of heart disease. One of our chief activities in the past year in this connection has been to cooperate with the tuberculosis survey teams, so that the chest plates which are taken to discover tuberculosis are also read so that we can refer early to physicians heart cases which previously have not been known to the patient. Those activities in the control of heart disease have also to do with refresher educational courses for the professions interested in heart disease. This includes not only physicians but nurses, nutritionists, health educators, and so forth.

TREATMENT WITH ANTICOAGULANT DRUGS

We have also continued our program dealing with the use of dicumarol, paritol, and drugs of that character which have to do with the clotting of the blood—the type of treatment which saves the lives of those people afflicted with heart strokes, coronary thrombosis. Those drugs cannot be used safely unless the patient is kept under observation; otherwise, the blood becomes too thin, and it is dangerous for the patient to take the drugs. Under accurate laboratory control, they are perfectly safe, and it is lifesaving to give the drugs; but in order to give them, you have to have laboratory people trained in the technique of determining quickly the blood clotting time, and our activities in this field have been to train people around the country through teams which move from State to State and through setting up, in cooperation with medical groups and health departments within the States, teachers who are competent to teach the procedure. It is not a complicated procedure, but it is one that is not as well known as we should like to have it.

TREATMENT OF RHEUMATIC FEVER

Another thing which this field of activity has been concerned with this past year has been the spreading of the word—the fact that we can prevent much in the way of rheumatic heart disease developed from rheumatic fever by giving prophylactic doses of penicillin or the sulfonamides. Rheumatic heart disease develops as a result of repeated attacks of rheumatic fever. The first attack of acute rheumatic fever sometimes, but very seldom, causes heart disease. It is the repeated attacks. So that those patients who get sore throats, the thing to do is to step in and stop the infection in its tracks, because it has a relationship—the hemolytic streptococcus—to rheumatic fever and vascular heart disease that is fairly well established. Of concern to us is an attempt to find out the minimum dose of penicillin which is adequate to prevent a recurrence of rheumatic fever. Penicillin is

expensive, even in these days when its cost has dropped down to a relatively few cents a tablet, because you must take tablets three times a day over long periods.

LOW-SODIUM DIETS BOOKLET

Another thing which I think is extremely important to report to this committee is the fact that, in cooperation with the Massachusetts State Department of Health and the Massachusetts Medical Society and the local medical society and board of health at Newton, Mass., we have prepared a book which has to do with planning low-sodium meals. I think I might show to the committee at this time a picture of what low-sodium meals mean [exhibiting]. On this side is the patient in January 1951, before she was put on a low-sodium diet, which shows the high blood pressure, and this [exhibiting] is a picture taken 7 months later. I think you can see even from this distance the difference in the swelling of the patient as a result of the low-sodium diet.

And here [exhibiting] I think is also a rather dramatic picture taken in November 1950. This is a little 13-year-old girl. She was put on a low-sodium diet. The picture on the left is a picture of the same girl later. You can see she was so swollen up at the start that her features were totally undistinguishable, and after 7 months this [indicating] shows the results of the low-sodium diet. By washing the sodium out and getting rid of the edema, she was restored to a fairly good degree of health.

BOOKLET DEVELOPED IN COOPERATION WITH MASSACHUSETTS

Mr. FOGARTY. Who developed this?

Dr. VAN SLYKE. This booklet on low-sodium diets was developed in cooperation with the Massachusetts Department of Health and the Newton Health Department under the heart-demonstration program which the Public Health Service has had for the last 3 years. These little booklets are sent to physicians just this way, containing a series of diets, and the physician has to determine what diet the patient shall be put on, and he gives the patient that sheet and says "You go on this diet." It is one thing to tell a patient to go on a diet; it is another thing to give them help so that he or she and his family can arrange for that diet. It is not necessary, but you can see there are descriptions of what to tell them. This happens to be a meat, fish, and poultry diet. And, when you come to fruits, there again are descriptions. This, to me, is a perfectly splendid job and indicates the type of activity which I think pays off tremendously. Dr. Paul White, who had the privilege of appearing before this committee, says he thinks there are about 750,000 people in this country who can well profit by the use of a low-sodium diet sometime—not necessarily right along but at some time in their lifetime relationship to their medical problem.

Mr. SCHWABE. You say "low sodium." Of course, you include sodium chloride?

Dr. VAN SLYKE. That is right.

Mr. SCHWABE. Of course, we laymen speak of it as salt.

Dr. VAN SLYKE. The reason we say "low sodium" is because salt is composed of sodium and chlorine. Chlorine does not make much dif-

ference, but sodium does. You get sodium from a lot of things. You get sodium benzoate from catsup. This represents something which is extremely important in helping the patient to carry out the doctor's orders. This is the first time a thing as skillful as this has been put out, to the best of my knowledge. And along with this goes a cookbook on how you prepare these things, and it is a companion piece to Low-Sodium Diets.

BOOKLET OF PRIMARY VALUE TO HEART PATIENTS

Mr. FOGARTY. On what type of patients does this have an effect?

Dr. VAN SLYKE. This is related to the heart patient. If I might explain just a little further, the heart is the central pumping station. Your kidneys and valves are the pipeline system that the heart must pump into. If sodium remains in the blood stream, it develops additional fluid in the blood stream, and there is additional pressure that the heart has to pump; and, by cutting down on sodium and getting away from edema, the heart has a much better chance to do the job. Otherwise, it is just pumping against an increasing head of pressure, and the ultimate outcome can only be heart failure.

Mr. SCHWABE. It reduces the load and tension and dries up the tissues to a certain extent?

Dr. VAN SLYKE. That is right, and returns to normal.

Mr. SCHWABE. The salt tends to hold fluid in the tissue?

Mr. DENTON. Is that what is commonly called hypertension—high blood pressure?

Dr. VAN SLYKE. No, sir; but it can be associated in many cases with high blood pressure developed from this type of failure of the heart to pump against. So, the low-sodium diet is extremely important in high blood pressure.

This picture [exhibiting] is a case of high blood pressure. This happens to be an X-ray of the heart. You can see that the heart has come from 20.6 centimeters down to 14.8.

I brought these things along to help you picture, as they help me picture, not what the words are but what the actual facts are in this connection.

This, Mr. Chairman, is the control demonstration part of our heart program in the Public Health Service, and I am hitting the top spots in this annual report to the committee.

UTILIZATION OF GRANTS IN STATE PROGRAMS

I would say the grants which are made to States for heart-disease control mirror these same kinds of activities, only the responsibilities lie much more within the States. They are grants, and those funds are not under our direct control. In the past year the States have pushed along the early case-finding program. They have supplemented and improved heart clinics; in certain instances they have established new heart clinics. They have pushed along the refresher type of training for professionals. I speak of "professionals," not merely meaning physicians but those other people who have to do with care and advice to the patient. They have pushed the program of prophylactics for rheumatic fever and rheumatic heart disease. There is really nothing

quite as satisfying, in my estimation, as to know that with a few tablets, three tablets a day, given over a long period of time, you can keep that person from developing rheumatic heart disease.

RHEUMATIC-HEART-DISEASE CONTROL

Control of rheumatic heart disease, when you put it down in terms of what it means, means instead of dying at 25, 30, 35, or 40 after a long, painful illness in the sense of the chronicity and totally unable to help himself or herself, if we can step in and prevent it, there is no reason why those people, barring other things, cannot live to a ripe old age. And rheumatic heart disease, as I think I reported to this committee last year, is costing this Government, in terms of just those people discharged from the last war, over $400 million for pensions, exclusive of care.

Mr. SCHWABE. It is not always easy to detect in early life; is it?

Dr. VAN SLYKE. No, sir; I am afraid not.

Mr. SCHWABE. That is a question to which I would like you to address yourself a little bit.

Dr. VAN SLYKE. I am glad to have this chance, because that is one of the difficult things we face. In the obvious case of rheumatic fever, where you have fever, migratory swelling of the joints, and symptoms that may be more pronounced than that, it grades down to the point where the patient may not have any idea he has rheumatic fever. It may be a very slight fever that does not come to his attention, except that he is just a little indisposed, or something that I have heard some committee members in days past speak about as growing pains in children. That, we are pretty sure, is a case of rheumatic fever. And why do we feel it is a case of rheumatic fever? Because rheumatic heart disease only comes when the patient has had one or more—usually two or more—attacks of rheumatic fever. So, when we find this person is troubled with a diseased mitral valve—and we can pretty definitely make a diagnosis of rheumatic heart disease—we know that rheumatic fever must have been present before. We used to think rheumatic fever did not occur in the South, simply because we did not have these things which came to the attention of the parents or came to the attention of the physician; but the development of rheumatic heart disease in people later on down there proves to us definitely that climate has a more or less moderating influence on rheumatic fever itself.

Mr. SCHWABE. On the manifestation?

Dr. VAN SLYKE. That is right.

I was speaking about the control grants to the States. I pointed out their activities which are carried out in conjunction with the local medical societies, the State medical societies, and with the State and local heart associations, and that this program is going along in excellent fashion even though it is only now in its third year of implementation.

PROGRAM OF GRANTS TO MEDICAL SCHOOLS

Another thing I should like to speak to—I do not want to take too much of the committee's time—is the program of grants to medical schools to aid them in the improvement and integration of heart cardiovascular teaching. Heart disease is not one disease; it is not re-

lated just to the heart itself. The heart is influenced by all the experiences of the body, and the medical student who learns of heart disease—and there are at least 20 different kinds of distinct heart disease—has to have a knowledge of physiology, anatomy, pathology, neurology, and so forth. And all of this comes back to the fact that in order to bring to the front door of the medical school, the medical graduate, the student who is as competent as anybody can be within that varied training, we find these grants to medical schools amply pay off in this regard, because they are given an integrated or coordinated curriculum which the medical schools run. We do not run them from a Federal Government point of view. And the deans and directors of cardiovascular teaching in those medical schools who participate in this program—and there are only 43 of 74 of the large schools which participate, since we do not have the funds to support the others—are very enthusiastic about this. Just the day before yesterday, talking to Dr. Joseph Hinsey of Cornell, not directly but through Dr. Jones, Dr. Hinsey is very anxious to get the directors of all cardiovascular teaching of all of the medical schools together so that they can trade ideas and experiences, teaching devices, and so forth, and I would hope that the Association of American Medical Colleges can go ahead with that program.

PROGRAM FOR RESEARCH FELLOWS AND TRAINEES

On research fellows and trainees, our funds have remained the same for the past 3 years. We train about 95 to 100 research fellows a year and about 40 to 45 trainees. A research fellow is a man or woman who is chosen, because of his or her brains and potential ability, to develop into leading research workers. They are provided with some support for this period of training so that we increase the staff of people throughout this country who are competent to do the more important cardiovascular research. Trainees are young physicians who are given specialty training in heart disease. I think I reported to this committee before that there are only a little over 600 people in this country qualified as heart specialists. That means, roughly, 1 per 250,000 or 275,000 of the population. In addition, there are about 10 times as many physicians who are trained in internal medicine than those who are especially competent in the heart field. That means there is only 1 specialist for every 25,000 or 30,000 people. It means if we are going to do the kind of job we should be doing in heart disease, applying what we already know, we just do not have enough people competent in that field.

RESEARCH STUDIES IN PROGRESS

Another aspect of the program is the money we give to nongovernmental scientists around the country to enable them to do more research in the heart field. We are supporting now in several States work on the new giant fat-protein molecules in the blood. You might have read about that in Collier's. That program is going along, and more and more knowledge is being turned out from this program. And a thing of great promise, even to those of us who are versed in the technicalities of the medical and biological field, is they have a brand-new method for producing changes in the fat metabolism in the blood

Given by vein or needle under the skin, they can change the metabolism of the giant fat-protein molecules. So we have, I think, not an adequate opening but a very encouraging opening to therapy which will eventually, I think, keep our citizens from dying too early from heart stroke.

The people who die usually are people in the prime of life, people we can least afford to lose. I attended a meeting of the scientists of the National Heart Institute last night, when this thing was discussed. I came away from that meeting so thrilled that it was hard to get to sleep. It reminded me yesterday of Mr. Fogarty asking Dr. Felix how he got to sleep. Ordinarily, I have no trouble getting to sleep, but that was so thrilling it kept me awake.

Dr. Beam, of the University of Virginia, is also working. He is taking a different approach. Instead of spinning things down at a rate which is roughly 250,000 times the force of gravity—in other words, if you jumped off the Washington Monument, you would go down at the force of gravity—this centrifugal force would bring you down a quarter of a million times faster. Dr. Beam, of the University of Virginia, is working on an infrared machine to see if we can find a simpler, more convenient, and cheaper method of determining what is in the blood stream in relation to the fat particles.

COOPERATIVE RESEARCH ON VALUE OF ACTH AND CORTISONE TREATMENTS FOR RHEUMATIC FEVER

We are continuing to carry out a cooperative study with the American Heart Association and the British medical research group on the value of ACTH and cortisone in rheumatic fever. As I told the committee last year, the purpose of this study is to determine does ACTH and/or cortisone favorably influence the course of rheumatic fever; secondly—and we have to follow the patients for a long time—do they prevent the development of rheumatic heart disease? When I first spoke about this thing to the committee, we very properly urged you not to consider as other than a preliminary statement any statement that ACTH or cortisone was any answer to rheumatic fever. It is rather satisfying that we did that, because I believe now, with our additional experience this past year, it appears to be quite effective in acute rheumatic fever where the patients are extremely ill and might die in less than a day—sometimes the chief rheumatic fever symptom is an inflammation of the heart, an acute myocarditis.

But in chronic rheumatic fever, it does not seem to have a punch there. That does not make it any less valuable, but it does bring you up to date as to what we have found and also points out that we are cooperating 100 percent with the American Heart Association and medical groups in this country.

MECHANICAL HEART DEVELOPMENTS

A thing I think I also ought to mention is the mechanical heart. I know you have seen references to that in the lay press from time to time. Through funds this committee makes available to the Heart Institute, we are supporting six places in this country which are working on the mechanical heart. This group of investigators got together just a couple of months ago and exchanged information,

exchanged the developments among them, and they issued a statement and endorsed a statement after the symposium was over that they believe this heart-lung preparation will be in use next year. This heart lung is a preparation to shunt the blood around the heart; therefore, you can get inside the heart and work in a bloodless field to help repair defects, bad valves, and so forth. I talked just a few days ago with Dr. Clarence Dennis, one of our investigators, who is working on this problem, and I can now report to this committee that this machine has been tried unsuccessfully in two human cases by Dr. Dennis. The first human case was a patient who was so far gone that this was really an attempt to see how it would fit into the body. There was really no hope at all, but they got inside, and when it was over the patient died.

The second patient on whom the heart-lung preparation machine was used went through the operation in great style. They did everything they wanted to do and sewed the patient up. The patient got along fine until that afternoon, when suddenly the patient developed pulmonary edema, water in the lungs, and died. If Dr. Dennis had known of the development and research from an entirely different angle, some basic research on the heart that used a spinal anesthesia in a certain way by which you can wash out the lung edema almost like that [snapping fingers]—if they had known of that in the second case, they might have stopped it from happening or cleared it up fast enough to prevent the lung edema from causing death. So I make a report of two unsuccessful cases.

Mr. DENTON. Can they take the human heart out and put the mechanical heart in?

Dr. VAN SLYKE. No, sir. What they do is to take the blood which comes into the heart and short circuit it around the heart into the vessel which carried the blood away from the heart; so that, with the heart bloodless and the blood passing around it and getting its oxygen supply put back into the blood and sending it out to the tissues, it comes back this way. As a matter of fact, they have successfully operated on dogs for as long as 2 hours and 7 minutes, with this machine they have now.

Mr. DENTON. They can use that while they operate on the heart?

Dr. VAN SLYKE. That is right. It gives a bloodless field in which to operate. Otherwise, with the heart quivering and beating with blood, it is a very, very difficult thing. And working in a bloodless field, there is a chance of doing a thousand things that they can do in a bloodless field. So I feel rather encouraged that the money which this committee has made available to our Institute in this field has really begun to pay off in a very big way.

PROGRESS IN REPLACEMENT OF SECTIONS OF DAMAGED ARTERIES

Next I should like to talk about vessel banks, which has also been in the papers, which is an extremely important thing—the replacement of damaged arteries by sections. Dr. Robert Gross, of Boston, has been working at this thing as a grantee of the Heart Institute for the last 3 years, and he has operated on some people during that time, and I think it would be of interest to show four photographs I have here. These are people who were operated on. I think you can see them from this distance. This first fellow was a clergyman, 30 years

old, who had a streptococcus infection and developed a swelling of the aorta about the size of a lemon, and this fellow was just about on the way to his death when Dr. Gross went in and cut out the swelling and put in a piece of artery he had gotten from some patient who had died and which was taken out after a post mortem. This picture [exhibiting] intends to show you that 30 months after the operation this fellow looks well. He is well, to all intents and purposes, and he has since made a contribution to the literature. He has written up a rather important historical treatise of the early Jesuit, and he has been spared to make that contribution simply because Dr. Gross made that successful artery graft.

All of these patients have had essentially the same type of operation. The aorta was defective in one way or another. The existence of a defect in the aorta is one the patient is born with. That is the large vessel which leads off from the heart. When the aorta comes off the heart, it curves down around to the bottom and gives off branches that supply the face, head, and arms before it goes down to the bottom of the aorta to the extremities. It is a condition we call coarctation. So the heart pumps plenty of blood to the head and arms but because of a constriction very little gets down below. The body tries to resist such an abnormal situation; so, in order to supply plenty of blood to the extremities or a minimum of blood to the extremities, the heart steps up the pressure. It first steps up the head pressure, and you get a terrifically high blood pressure in the upper extremities and head in an effort to supply blood to the lower extremities. What Dr. Gross has done as a result of research funds to pay grantees is to bring this to pass. These four people are just a drop in the bucket to the number of people who will eventually profit by it. Both the military and industry will profit by it.

Mr. SCHWABE. Was the operation performed on only four?

Dr. VAN SLYKE. No. Those are typical. This [exhibiting] is the first boy that was operated on. That was 3 years and 8 months ago when they operated.

Mr. DENTON. How do they keep the blood going through the aorta while they operate?

Dr. VAN SLYKE. They do not. They just clamp it off.

Mr. DENTON. They have to work awfully fast.

Dr. VAN SLYKE. They do. I do not know just how to say this, but the idea they first had that you must maintain a continuous supply of blood to the tissues probably is not as definite as we once thought it was, because Dr. Brian Blades, a surgeon in this town and also one of the researchers working on this, has shown that you can interrupt the blood supply for several hours and then let the blood go through, and the dire effects that we anticipated just do not occur. I cannot go into the technicalities of the operation. Incidentally, these pieces of vessel they put in, although they are live tissue essentially, get their nutrition from the outside, and Dr. Blades has shown that the blood supply comes from vessels growing right into this artery graft of pieces they put in, so that it becomes a live, dynamic part of the vascular system.

STUDIES OF RELATIONSHIP OF HORMONES TO CORONARY THROMBOSIS

Then, as to hormones and the heart system, the relationship of hormones to coronary thrombosis has been studied the past year. We have a group of investigators who for the first time have been able to take adequate motion pictures of the heart in action—not still pictures but adequate motion pictures. It means we will have another device which will aid us not only in understanding the heart and its mechanism but will aid us in diagnoses. It is a further step in the direction that the electrocardiograph is moving.

PROGRESS OF THE FRAMINGHAM PROJECT

Let me turn to our own intramural program. First I would like again to report the fact that the Framingham project is going along in excellent shape in Framingham, Mass., and the medical and lay groups up there are cooperating with us splendidly. We have 6,000 citizens under observation—just physical examination and recheck. I mean we have the finest cooperation anybody can get, so that we can look back after the end of 20 years and see if there are factors which have to do with the production of heart disease and factors which have to do with the progress of heart disease once developed. It is the most interesting and thrilling epidemiological experiment I know about. This is the first time it has ever been done any place in the world. And again I urge you and your committee, when you are in Framingham area, to go out and see that, and when you go through, I hope you will let us include you in the series. It is completely accepted by the medical society and lay groups.

DEVELOPMENT OF SHORT ACTING ANESTHETICS

Also in our own intramural research program we have been very interested in the past year in developing better short acting anesthetics. The heart patient is subject to anesthesia from time to time, and the less poison we introduce into the patient, the better. We found by the previous use of anesthesias that they left substances in the body that were injurious to the patient. Briefly, what was done was that the scientists have prepared other short-acting anesthetics which do not leave a toxic influence.

We are working on hundreds of anticlotting agents. I spoke about the training to determine the clotting time of blood. We are working with dicumarol for one thing. Dicumarol keeps the blood from clotting and improves the chances of a patient with a heart stroke. When we give dicumarol, one of the things is that we make the blood thinner, which is better for the patient, but its full effect is not felt for 48 hours, and when you stop giving it it continues to have an effect for an additional 48 hours. It is dangerous; if the blood gets too much of it and the patient begins to bleed, you are in a pretty difficult spot.

What we are doing is trying to develop better drugs. We have some very good leads on drugs which act faster. Heparin from the blood of leeches is very valuable, but heparin is scarce and inordinately expensive, and so we are researching for the answer to save life.

I mentioned last year the effect of procaine amide on disorders of the heartbeat. This is a drug derived from the ordinary procaine

used in dental anesthesia and it is becoming very widely used around this country. Its use is spreading nationally, and it must be saving lives.

Salt we mentioned before. We are continuing our basic work on the relationship of salt to heart failure. In our own Institute we are working on the use of so-called resins by mouth so that the salt in the diet—which will taste good to you—won't get into the system. They are not adequate now for the simple reason they are bulky and disagreeable to people, but we are looking for things to enable people to have a low salt diet. We have recent new drugs, hormonal in character and some straight-out synthetic mixtures, which lower the blood pressure, which does not take the place of the normal blood pressure but brings it down and holds it for a long time.

These are the highest of the high points of our program. I think all in all we have had a very, very successful year since I last had a chance to talk to you. I think we have made progress, and I think the outlook for the future is one of the most thrilling and encouraging things you can imagine.

RELATIONSHIP OF STUDIES WITH MENTAL HEALTH PROGRAM

Dr. Felix yesterday spoke about the relationship of mind to high blood pressure. We grant and we are working with Dr. Felix and his staff over at the Baltimore city hospital on certain psychosomatic aspects of hypertension. On the other hand, we are, in our work, concerned with the hardening of arteries, in cerebral arteriosclerosis as well as in relation to heart disease. We can probably make one of the greatest contributions in the field of mental health by stopping not only hardening of the arteries in the heart but in the brain with a type of compound I have mentioned. Yesterday, presenile psychosis was discussed by the committee. Here we may some day be able to help.

Mr. DENTON. How can you do that?

Dr. VAN SLYKE. We definitely do not know, but I did indicate that for the first time we now have a compound which alters the metabolism of the lipoprotein molecules in the blood. We are away back in the days of Marconi in terms of wireless, and your question ties up to the television age. We are just that far apart. But given the support and encouragement we need, we will get there a lot faster than Marconi's wireless went into television. We can promise you that. But it certainly was an encouraging thing to see that here was a compound which would interfere with faulty lipoprotein—fat—metabolism. We have the key now, and what we have to do is to make sure we get all of these phases of motion integrated. The thing is going to unlock and is going to unlock, I am quite sure, in my lifetime.

Mr. FOGARTY. That is a very interesting statement, Doctor.

Dr. VAN SLYKE. My apologies for taking so long.

BUDGET REQUEST FOR 1953

Mr. FOGARTY. You estimate you will have available in 1952 $9,267,000, and you are asking for $9,749,000 in 1953, which shows an increase of $482,000.

Dr. VAN SLYKE. Yes, sir.

EXPLANATION OF PERSONAL SERVICES INCREASE

Mr. FOGARTY. You had 353 positions in 1952, and you are asking for 366 in 1953, which shows a net increase of 13. However, you are asking for 26 new positions under the title of "Direct operations, research." Am I correct in saying that these additional positions are going to be used solely for operations at the new clinical center at Bethesda?

Dr. VAN SLYKE. Twenty-three are to be used for the section on heart surgery; the other three are for visiting scientists.

Mr. FOGARTY. Will you put in the record a breakdown of those positions?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. Also give us a breakdown of the number of positions you expect to request for 1954 to complete the staffing of the clinical center when it is in full operation.

Dr. VAN SLYKE. Yes, sir.

(The requested information follows:)

Salaries, expenses, and grants, National Heart Institute, Public Health Service, breakdown of new positions, 1953

Title	Grade	Number of positions	Net amount
Clinical investigations:			
Rates in excess of $14,800: Medical officer		1	$7,500
Medical officer	GS-13	1	4,200
Do	GS-11	1	3,000
Scientist	GS-9	1	2,530
Supporting technical staff		15	23,020
Commissioned officers:			
Full grade		1	3,800
Assistant grade		3	8,550
Visiting scientist program: Ungraded positions at rates above $4,600: Scientist		3	6,000
Regular pay in excess of 52-week base			400
Other objects cost			18,000
Total increase		26	77,000

Projected costs for the above in 1954 are estimated at $310,000 for 77 positions after allowing a lapse of about 40 percent for new positions. These figures exclude costs for patient care and supporting research services reflected in the clinical center table for the appropriation "Operating expenses, National Institutes of Health."

REDUCTION FOR TECHNICAL ASSISTANCE TO STATES

Mr. FOGARTY. You are asking for 26 new positions but show a decrease of 13 positions in technical assistance to States. That is just a reduction in your program to that extent?

Dr. VAN SLYKE. Yes, sir. The Newton project we have had running for 3 years. As I have indicated, quite as well as I know how, this thing is worth while; but the State and city are taking that over, and that is the aim of our demonstration program.

COST OF PAY ACT INCREASE IN 1952

Mr. FOGARTY. Now you have a proposed supplemental for $97,000 due to the pay act increase last year. What do you anticipate the total cost of the pay act increase to be in 1952?

Mr. HARLOW. $122,000.

Mr. FOGARTY. And you are absorbing $25,000 in 1952; is that correct?

Dr. VAN SLYKE. Yes, sir.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. How much did you ask of the Bureau of the Budget?

Dr. VAN SLYKE. For the total program?

Mr. FOGARTY. Yes.

Dr. VAN SLYKE. Our total request to the Bureau of the Budget for the total Heart Institute program, which includes both our A and B budgets, was $12,898,179.

TRANSFER OF FUNDS TO CIVIL DEFENSE

Mr. FOGARTY. What is this deduction of $800,000? Is that your blood program?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. I think Dr. Scheele explained that, but would you explain it briefly so this part of the record may be complete?

Dr. VAN SLYKE. The $800,000 which is in our budget for the current year is intended to provide funds to support research associated with, shall we say, the defense effort—the need for blood on the front lines and for military activities—as well as the straight research implications. For the forthcoming year it is my understanding the Bureau of the Budget has suggested, has requested, that we not include funds in this program, since they are going to ask for this same amount of funds or somewhat the same amount of funds for the Federal Civilian Defense Administration, so that they will be responsible for this activity.

DETAILED INFORMATION REGARDING GRANTS

Mr. FOGARTY. Now, I asked the Cancer Institute and the Mental Health Institute to give a breakdown of their grants. You were here yesterday when we asked that?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. The number of grants, fellowships, etc., who they are to, and how much they amount to; also the membership of councils and boards that pass upon these grants and the position of each.

Dr. VAN SLYKE. Yes, sir.

(The requested information follows:)

MEMBERS OF TRAINING AND FELLOWSHIP BOARDS

NATIONAL HEART INSTITUTE

Dr. R. C. Arnold, M. D., Chief, Technical Services Branch.
Dr. Bert R. Boone, M. D., Chief, Technical Development Section, Research Branch.
Senior Surgeon Thomas E. O'Brien, Office of Director.
Dr. J. F. Yeager, Ph. D., Acting Chief, Grants and Training Branch.
Dr. C. J. Van Slyke, M. D., Director, National Heart Institute.

Mr. Richard J. Finnegan, 211 West Wacker Drive, Chicago 6, Ill. (term expires 1952).
Mr. John Higgins, 1303 Public Service Building, Portland 4, Oreg. (term expires 1955).
Dr. T. Duckett Jones, medical director, Helen Hay Whitney Foundation, 525 East Sixty-eighth Street, New York 21, N. Y. (term expires 1954).
Mrs. Mary W. Lasker (Albert D.), Chrysler Building, New York 17, N. Y. (term expires 1954).
Dr. H. M. Marvin, 303 Whitney Avenue, New Haven 11, Conn. (term expires 1953).
Dr. Hugh J. Morgan, Vanderbilt University Hospital, Nashville 4, Tenn. (term expires 1952).
Mr. Frank Neely, care of Rich's, Inc., Atlanta, Ga. (term expires 1955).
Mr. Erwin Oreck, 31 West Superior Street, Duluth 2, Minn. (term expires 1953).
Dr. Irvine H. Page, director, research division, Cleveland Clinic Foundation, Cleveland, Ohio (term expires 1953).
Dr. Edward L. Turner, dean, School of Medicine, University of Washington, Seattle, Wash. (term expires 1955).
Dr. Paul D. White, executive director and chief medical adviser to the council, 264 Beacon Street, Boston, Mass. (term expires 1954).
Mr. Albert J. Wolf, president, board of managers, Touro Infirmary, 818 Gravier Street, New Orleans 12, La. (term expires 1952).

Ex officio members

Dr. E. H. Cushing, Assistant Chief Medical Director, Research and Education Service, Veterans' Administration, Washington 25, D. C.
Alternate for: Vice Admiral Joel T. Boone, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington 25, D. C.
Col. William D. Preston, Chief, Internal Medicine Branch, Office of the Surgeon General, United States Air Force, Washington 25, D. C.
Alternate for: Dr. W. Randolph Lovelace II, Chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington 25, D. C.
Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.

National Heart Institute research grants approved for payment from fiscal year 1951 funds, by State and institution

	Number	Amount
Grand total	[1] 404	$4,472,436
Alabama: University of Alabama	2	22,901
Arizona: University of Arizona	1	10,000
California	40	425,451
University of California, Berkeley	14	212,262
University of California, Los Angeles	2	25,736
Cedars of Lebanon Hospital	5	40,946
Mount Zion Hospital	3	22,742
University of Southern California	12	99,118
Stanford University	4	24,647
Colorado	6	47,014
University of Colorado	5	44,557
University of Denver	1	2,457
Connecticut: Yale University	4	21,546
District of Columbia	8	99,833
Georgetown University	5	60,876
George Washington University, Warwick Clinic	2	25,957
Howard University	1	13,000
Florida: University of Miami	1	$8,000
Georgia	3	39,852
Emory University	2	29,052
University of Georgia	1	10,800
Illinois	31	334,989
University of Chicago	9	74,140
University of Illinois	14	106,125
Loyola University	2	24,500
Michael Reese Hospital	4	54,189
Northwestern University	2	75,900
Indiana: University of Indiana	1	8,100
Kansas: University of Kansas	8	41,475
Kentucky: University of Louisville	3	35,057
Louisiana	7	59,281
Louisiana State University	3	14,281
Tulane University	4	45,000
Maryland	13	126,057
Baltimore City Hospital	1	15,000
Johns Hopkins University	11	105,057
University of Maryland	1	6,000

[1] These grants are distributed among 97 institutions in 35 States, District of Columbia and 1 Territory.

National Heart Institute research grants approved for payment from fiscal year 1951 funds, by State and institution—Continued

	Number	Amount
Massachusetts	58	$651,258
Boston University	3	28,337
Children's Medical Center	1	20,000
Harvard University	35	381,029
Massachusetts General Hospital	8	124,179
Massachusetts Memorial Hospitals	2	4,940
New England Deaconess Hospital	2	15,044
New England Medical Center	4	41,562
Brigham (Peter B.) Hospital	2	27,167
Individual grants	1	9,000
Michigan	11	133,228
Archer-Reed College	3	26,100
University of Michigan	6	75,248
Wayne University	2	31,880
Minnesota: University of Minnesota	15	170,481
Mississippi: University of Mississippi	1	10,724
Missouri	16	182,317
St. Louis University	3	39,348
Washington University	12	132,969
Second International Gerontological Congress	1	10,000
Montana: Western Foundation of Clinical Research	1	33,000
New Jersey: St. Peter's General Hospital	1	11,394
New York	70	776,761
Union College and University	4	23,145
Mary Imogene Bassett Hospital	1	13,020
American Heart Association	1	15,000
University of Buffalo	3	31,492
Columbia University	15	231,017
Cornell University	18	175,082
State University of New York	6	52,354
Montefiore Hospital	1	23,000
Mount Sinai Hospital	2	14,472
New York Medical College	4	25,076
New York University	8	70,806
University of Rochester	5	72,219
Syracuse University	2	30,078
North Carolina	13	140,671
Duke University	8	85,351
University of North Carolina	3	26,000
Wake Forest: Bowman-Gray	2	29,320
Ohio	17	$294,955
University of Cincinnati	2	19,893
Cleveland Clinic Foundation	4	97,763
Toledo Hospital Institute of Medical Research	1	8,000
Committee on Research Development, NBP	1	87,815
Ohio State University	2	11,042
Western Reserve University	6	67,942
Hospitals of Cleveland University	1	2,500
Oklahoma: University of Oklahoma	4	27,706
Oregon: University of Oregon	1	4,644
Pennsylvania	33	501,492
Children's Hospital, Philadelphia	1	17,280
Hahnemann Medical College and Hospital	4	22,500
Jefferson Medical College	1	32,205
University of Pennsylvania	19	297,359
Philadelphia General Hospital	1	14,999
University of Pittsburgh	2	58,168
Temple University	3	25,399
Bryn Mawr Hospital	2	33,582
South Carolina: South Carolina State Medical College	2	11,635
Tennessee	8	63,392
University of Tennessee	3	22,397
Vanderbilt University	5	40,995
Texas	6	35,798
Baylor University	3	16,361
Texas Agricultural and Mechanical College	1	8,000
University of Texas	1	2,592
Southwestern Medical School	1	8,845
Utah: University of Utah	2	21,526
Vermont: University of Vermont	7	39,226
Virginia: University of Virginia	1	9,249
Washington: University of Washington	5	39,139
West Virginia: University of West Virginia	1	3,100
Wisconsin: University of Wisconsin	1	20,000
Puerto Rico	2	9,074
San Juan Diagnostic Clinic	1	5,074
University of Puerto Rico	1	4,000

***National** Heart Institute teaching grants approved for payment from fiscal year 1951 funds, by State and institution*

	Number	Amount
Grand total	49	$735,854
Alabama: University of Alabama	1	14,000
California	2	28,000
University of California, Berkeley	1	14,000
University of Southern California	1	14,000
Colorado: University of Colorado	1	14,000
Connecticut: Yale University	1	14,000
District of Columbia	2	28,000
Georgetown University	1	14,000
Howard University	1	14,000
Georgia: Emory University	1	14,000
Illinois	4	56,000
University of Chicago	1	14,000
University of Illinois	1	14,000
Loyola University	1	14,000
Chicago medical schools	1	14,000
Iowa: State University of Iowa	1	14,000
Kansas: University of Kansas	1	13,500
Louisiana	2	28,000
Louisiana State University	1	14,000
Tulane University	1	14,000
Maine: Mount Desert Island Biological Laboratory	1	10,000
Maryland: Johns Hopkins University	1	14,000
Massachusetts: Harvard University	1	14,000
Michigan	2	26,000
University of Michigan	1	12,000
Wayne University	1	14,000
Minnesota: University of Minnesota	1	14,000
Mississippi: University of Mississippi	1	8,000
Missouri	2	$22,532
St. Louis University	1	14,000
Washington University	1	8,532
Nebraska: University of Nebraska	1	14,000
New York	5	69,949
University of Buffalo	1	14,000
Cornell University	1	14,000
New York State University	2	27,949
New York University	1	14,000
North Carolina	2	28,000
Duke University	1	14,000
Wake Forest: Bowman-Gray Medical	1	14,000
Ohio	2	55,376
University of Cincinnati	1	12,500
Western Reserve University	1	42,876
Oklahoma: University of Oklahoma	1	14,000
Oregon: University of Oregon	1	14,000
Pennsylvania	4	55,997
Hahnemann Medical College and Hospital	1	14,000
Jefferson Medical College	1	13,997
University of Pennsylvania	1	14,000
Woman's Medical College	1	14,000
South Dakota: University of South Dakota	1	5,000
Tennessee	2	34,000
Meharry Medical College	1	20,000
University of Tennessee	1	14,000
Texas: Southwestern Medical School	1	14,000
Utah: University of Utah	1	12,500
Virginia: Virginia Medical College	1	14,000
Wisconsin	2	73,000
Marquette University	1	14,000
University of Wisconsin	1	59,000

National ***Heart Institute*** *traineeship awards approved for payment from fiscal year 1951 funds, by State and institution*

	Number	Amount
Grand total	49	$152,600
California	4	11,305
University of California, Berkeley	1	3,600
University of Southern California	3	7,705
Connecticut: Yale University	2	7,200
District of Columbia: George Washington University	2	3,800
Georgia: Emory University	1	3,600
Indiana: University of Indiana	1	3,000
Louisiana	3	10,800
Tulane University	2	7,200
Louisiana State University	1	3,600
Maryland	3	7,595
Johns Hopkins University	1	1,800
U. S. Marine Hospital	2	5,795
Massachusetts	7	20,700
Peter Bent Brigham Hospital	1	900
Massachusetts General Hospital	2	7,200
House of Good Samaritan Hospital	1	1,800
Beth Israel Hospital	2	7,200
New England Medical Center	1	3,600
Minnesota: University of Minnesota	1	$3,600
Missouri: St. Louis University	1	3,600
New York	7	22,500
Mt. Sinai Hospital	1	3,600
Columbia University	2	5,100
Montefiore Hospital	1	3,600
University of Buffalo	1	3,600
New York State University	1	3,000
Harlem Hospital	1	3,600
North Carolina: Duke University	2	7,200
Ohio	2	6,600
University of Cincinnati	1	3,600
Western Reserve University	1	3,000
Pennsylvania	6	21,600
University of Pennsylvania	3	10,800
Children's Hospital	1	3,600
Philadelphia General Hospital	2	7,200
Rhode Island: Rhode Island Hospital	1	3,000
South Carolina: Medical College of State of South Carolina	1	1,800
Tennessee: Meharry Medical College	1	3,300
Texas: University of Texas	2	6,900
British Isles: National Heart Hospital	1	900
France: University of Paris	1	3,600

National Heart Institute fellowship awards [1] approved for payment from fiscal year 1951 funds, by State and institution

	Number	Amount
Grand total	106	$300,588
Alabama: University of Alabama	1	3,000
California	3	7,050
University of California, Berkeley	2	5,100
University of Southern California	1	1,950
Colorado: University of Colorado	1	3,600
Connecticut: Yale University	6	16,600
District of Columbia: George Washington University, Warwick Memorial Clinic	4	9,033
Illinois	12	30,510
University of Chicago	6	15,650
University of Illinois	4	9,200
Michael Reese Hospital	1	3,600
Northwestern University	1	2,060
Indiana: University of Indiana	1	2,350
Kansas: University of Kansas	3	9,100
Maryland	6	18,050
Johns Hopkins University	5	14,450
National Naval Medical Center	1	3,600
Massachusetts	18	52,945
Boston University	1	2,042
Children's Medical Center, Boston	1	3,934
Harvard	12	33,169
Massachusetts Memorial Hospital	2	6,900
P. B. Brigham Hospital	2	6,900
Minnesota: University of Minnesota	3	11,100
New Mexico: University of New Mexico	1	$2,350
New York	14	46,244
Columbia University	4	12,144
Cornell University	4	13,550
State University of New York	1	3,600
New York University	3	9,750
St. Luke's Hospital	2	7,200
North Carolina	6	10,269
Duke University	5	8,587
University of North Carolina	1	1,682
Ohio	5	18,600
University of Cincinnati	3	11,400
Cleveland Clinic Foundation	1	3,300
Western Reserve University	1	3,900
Pennsylvania	6	18,077
University of Pennsylvania	5	14,285
Philadelphia General Hospital	1	3,792
South Carolina: South Carolina State Medical College	1	2,350
Tennessee: University of Tennessee	1	2,350
Utah: University of Utah	2	7,200
Vermont: University of Vermont	1	3,042
Virginia: University of Virginia	2	6,617
Wisconsin: University of Wisconsin	5	11,850
Canada: McGill University	1	3,000
British Isles	3	5,301
Edinburgh University	1	302
University of London	2	4,999

[1] These 106 awards are distributed among 21 States, the District of Columbia, and 2 foreign countries.

GRANT ALLOCATIONS BY STATE, 1951–53

Mr. FOGARTY. I will ask that the table starting on page 164 and running over on pages 165 and 166 be inserted in the record at this point. Will you give us the estimate of the amount for 1953 to be added to this table, the same as we have asked of the other institutes?

Dr. SCHEELE. Yes, sir.

(The information referred to follows:)

Grant-in-aid allocations for heart-disease control, fiscal years 1951–53

State or Territory	Allocation			State or Territory	Allocation		
	1951	1952	1953		1951	1952	1953
Alabama	$44,000	$40,200	$40,700	New Hampshire	$13,800	$12,900	$12,900
Arizona	15,400	14,600	14,800	New Jersey	39,900	34,600	34,500
Arkansas	34,300	28,700	28,500	New Mexico	14,700	14,900	14,700
California	71,700	59,800	63,000	New York	91,100	78,400	78,500
Colorado	18,400	17,300	17,500	North Carolina	53,400	47,500	47,100
Connecticut	21,600	19,600	19,600	North Dakota	13,600	13,100	13,200
Delaware	11,200	11,100	11,100	Ohio	64,000	54,400	54,400
District of Columbia	14,900	13,400	13,400	Oklahoma	33,200	27,600	26,900
Florida	30,300	29,200	30,000	Oregon	21,600	17,600	18,300
Georgia	44,100	40,900	41,000	Pennsylvania	87,700	70,800	70,700
Idaho	14,000	13,200	13,200	Rhode Island	14,400	14,000	13,900
Illinois	61,400	53,800	52,700	South Carolina	34,100	30,700	30,600
Indiana	39,900	33,900	33,600	South Dakota	13,800	13,400	13,400
Iowa	30,900	25,900	25,400	Tennessee	43,500	38,900	39,400
Kansas	24,900	22,000	21,500	Texas	75,800	65,400	64,400
Kentucky	43,200	37,000	37,100	Utah	14,800	14,000	14,100
Louisiana	37,300	32,800	32,500	Vermont	12,300	12,000	12,000
Maine	16,800	15,900	15,900	Virginia	37,500	34,900	35,200
Maryland	24,000	22,700	23,200	Washington	25,900	22,800	22,500
Massachusetts	41,500	36,000	35,600	West Virginia	28,300	25,500	25,400
Michigan	53,300	45,800	45,700	Wisconsin	34,400	30,500	30,300
Minnesota	34,100	29,000	28,600	Wyoming	11,400	11,100	11,100
Mississippi	40,700	35,200	35,500	Alaska	10,500	10,300	10,400
Missouri	41,800	35,200	34,500	Hawaii	13,600	12,500	12,400
Montana	12,700	12,700	12,700	Puerto Rico	41,800	35,600	35,900
Nebraska	19,400	17,700	17,500	Virgin Islands	2,700	2,700	2,700
Nevada	10,400	10,300	10,300	Total	1,700,000	1,500,000	1,500,000

PURPOSE OF THE ELECTROKYMOGRAPH INSTRUMENT

Mr. FOGARTY. I think a year ago when we paid you a visit out there we saw this machine that was developed by your people at Tufts. What was the name of that?

Dr. VAN SLYKE. The electrokymograph.

Mr. FOGARTY. That was developed, as I understand, by a grant from the Heart Institute.

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. Tell us about it—how it was developed and so forth.

Dr. VAN SLYKE. The electrokymograph was developed jointly by scientists now in the Heart Institute and a non-Federal grantee who got some support through the grants program. The electrokymograph shows the movement of the heart. The X-ray tube shines energy through, and the heart blocks it, and the amount of light passing back and forth between a spot is transmitted into electrical energy which we put on a chart. And we can, by passing this beam around the edge of the heart and comparing it to what we have learned to find in normal people, give a diagnosis based on heart motion. I stress that "based on heart motion" or muscle motion because the electrocardiograph does not measure heart motion; it only measures the electrical wave which passes through the heart muscle.

I think an important consideration, too, is that the electrical motion may pass through and the heart muscle may not respond to it normally. You cannot pick that up as readily with the electrocardiograph as you can with the electrokymograph, because the heart motion pulls down as the muscles pull together, and the shadow gets

smaller. But if you have a coronary of the heart wall which has been involved by being blocked off, the blood supply does remain, and as the heart returns it pulls it out. And the electrokymograph is very important in detecting this condition. And it is serious, of course, that it be detected, because that is the kind of patient who definitely needs rest.

COMPARISON WITH ELECTROCARDIOGRAPH

Mr. FOGARTY. It is a distinct improvement over the electrocardiograph?

Dr. VAN SLYKE. Yes, sir; it is a distinct improvement. I would say it is more of a complementary instrument.

Mr. SCHWABE. It is not a substitute.

Dr. VAN SLYKE. It is not a substitute, no more than the right front wheel is a substitute for the left front wheel. You really have to have both.

Dr. TOPPING. I might make that a little simpler by saying if you have a little rubber balloon and you blow air into it, if there is any weak spot, when you blow into it, that part of the balloon sticks out a little. That is what happens with the heart. You can see it fill and contract and push the blood out, and if there is any weakness in the heart, you can see that part push out, and this electrokymograph is simply to show the contour of the heart.

Mr. FOGARTY. You could not see it on the electrocardiograph?

Dr. TOPPING. It is purely a recording of the electrical impulses.

EFFECT OF ACTIVITY TRANSFER ON BUDGET ESTIMATE

Mr. DENTON. I do not understand this figure on page 161. It shows a total appropriation of $251,000 less than last year, but then it shows obligations of $482,000 more than last year. Was that because of this $800,000 civil defense transfer for taking care of the blood plasma?

Mr. HARLOW. That is a difference in those three figures that appear below the $10 million at the top of the page. We expect to get an additional $97,000 for the pay increase; we will lose $830,000 by reason of its having been taken up in other appropriations—$800,000 to civilian defense and $30,000 in "Assistance to States, general."

EXPLANATION OF CORONARY THROMBOSIS AND CORONARY EMBOLUS

Mr. DENTON. Coronary thrombosis and coronary embolus are essentially different things; are they not?

Dr. VAN SLYKE. No; they are essentially the same thing. Coronary embolus means a blood clot comes along and strikes the narrow part of the vessel, like a cork or plug in a pipe. Thrombosis, on the other hand, might be an extension of the blood clot beyond the embolus. The embolus stops, and then the thrombus forms right within the vessel beyond the clot itself and extends the clot action. That is the reason why we want to give these anticoagulant drugs in cases of heart stroke, where the embolus comes and stops, because if we can keep the blood from clotting behind the embolus—keep it from extending—nature will take that plug out at some time, and the patient can go ahead and have a perfectly good life. That is the one thing

I should like to stress, if I may, at this point—the gloomy attitude toward heart stroke that we have had. Really we have only known about heart stroke scientifically for the last 25 years—this type of coronary embolus stroke. I think Pope Leo XII reported about sudden heart deaths a good many centuries ago. We have had a very gloomy attitude toward heart stroke. That is not justified; if we can give to people that which we already know about and if we can apply the anticoagulant drugs, the newer anticoagulant drugs and the new progress that has been developed, I am quite sure our gloomy attitude is not justified.

Lots of people will die like that [snapping fingers] from coronary embolus, but the most of them do not die at once.

Mr. DENTON. It seems to me I have seen cases where they just took out a little blood, and in other cases it was kind of a gray substance that formed around it. I thought it looked like calcium. I thought they were two different things, Doctor. I am just looking at it from a layman's point of view.

Dr. VAN SLYKE. I would say this, that when you talk about coronary embolism and thrombosis within the lumen of a blood vessel, the difficulty comes when the clot comes along and is stopped at the vessel narrowing, and that is an embolism. That is, a resisting piece of matter in there.

Now, a thrombosis formed from the blood is an extension of that clot, just the same as any time we cut ourselves, cut one of the vessels and a clot forms and stops it.

Mr. DENTON. It is always a blood clot?

Dr. VAN SLYKE. Yes, sir, that which is within the lumen.

Now, to return to your question, Mr. Denton, since you have made this additional comment, I believe I can answer it with a little bit more intelligence. What you saw was the vessel itself where it narrows down because of the hardening of the artery.

Mr. DENTON. Well, I would not say exactly white.

Dr. VAN SLYKE. It was kind of pearly in color?

Mr. DENTON. Yes.

Dr. VAN SLYKE. That is the type of hardening of the artery that we are going to try to lick by changing the fat metabolism that goes on within certain bodies, that is to say, they may go on, so that they widen and develop these narrowings of the vessel of which I spoke.

Now, at this point I am not talking about embolisms or thrombosis, but the narrowing of the vessel. I said that this foreign body in the vessel comes along and stops at a narrow point.

That is what makes the hardening of the artery, which is so very dangerous in heart disease, in cardiac conditions.

Mr. DENTON. That is all.

Mr. FOGARTY. Mr. Schwabe.

EFFECTS OF TOXIC CONDITIONS ON HEART

Mr. SCHWABE. Doctor, there is considerable difference of opinion, is there not, among heart experts with reference to whether or not a certain type of heart disease is caused by rheumatic fever earlier in life, or some other cause? They are not always able to determine or actually determine generally from the pathological condition that

they discover when they are called upon to examine a patient whether it was the result of earlier rheumatic fever or the result of something else?

Dr. VAN SLYKE. That is right, Mr. Schwabe.

Let me see if I see what you mean by the use of the word "generally."

I think generally that a heart man can tell what it was due to, but in certain instances, we just do not have the competence to distinguish the causes.

Mr. SCHWABE. There is an old saying among heart men, is there not, or, among a great many of them, that every toxic condition or illness leaves some scar in the heart or the vascular system somewhere, the extent of it varying, of course, in each case?

Dr. VAN SLYKE. I think, in general, Mr. Schwabe, that I would be inclined to agree with that, but there are notable exceptions to it, of course.

Mr. SCHWABE. Yes.

Dr. VAN SLYKE. Take for instance the toxin in diphtheria. If a patient has diphtheria this toxin gets all through his system, and it is very dangerous.

That is the reason a physician always cautions people to be very careful when they get up following diphtheria because with that toxin in their system they can drop dead just like that [snapping fingers]. However, after about 2 or 3 weeks it works out of their system, and they are just as good as they ever were.

TYPES OF HARDENING OF ARTERIES AND EFFECTS ON HEART

Mr. SCHWABE. Then with reference to arteriosclerosis, hardening of the walls of the arteries, they may discover it in some cases in extremities, where it is very pronounced and in others that it is only in the right or left ventricle, where it has hardened, rather than dispersed through the whole system? Is that right?

Dr. VAN SLYKE. Yes, sir; that is right, Mr. Schwabe.

There actually are two main types of hardening of the arteries.

One of them is the pipe-stem type in which you can feel it in certain patients in their radial artery, or you can see it alongside of their forehead where the artery pulses.

Then there is also the other type, that we call atherosclerosis, in which the characteristic thing not only is building up of the tissue to make the lumen of the artery smaller, but there is a marked denuding of the inner covering of the vessel.

Mr. SCHWABE. Of the surface?

Dr. VAN SLYKE. Yes, of the surface, which makes it a perfectly wonderful spot for thrombi to stop and form there, where you get your blocking.

Mr. SCHWABE. In those cases where you do not have a hardening of the walls of the arteries, you seldom have cases of thrombosis; is not that true?

Dr. VAN SLYKE. Yes, that is right, generally speaking.

Mr. SCHWABE. A lack of elasticity, so to speak, as the layman might say, which is evidenced in the hardening of the walls of the arteries makes it much more easy for thrombosis to become manifest and pronounced?

Dr. VAN SLYKE. Yes, that is right, Mr. Schwabe.

May I point out to you that the artery is not merely a tube, but it is an elastic tube, and when the heart pushes this mass of blood forward the vessel opens up. The heart valve stops the blood from coming back so you do get this elastic current flow of the blood.

Now, when we lose the elasticity the limb supply fails because there is no adequate circulation there. That is what we are talking about in relationship to the extremities and it gets so bad that in some cases people lose their toes, and some people even have to have their legs amputated above the knee.

Mr. SCHWABE. And, likewise, some of our trouble with the eyes develops as a result, especially cataracts.

Dr. VAN SLYKE. I would like to include alike many things in the cardiovascular system. There is little that we do not include in these complications.

Mr. SCHWABE. Do you find this trouble many times in the case of some patients where they have repeated attacks of thrombosis?

Dr. VAN SLYKE. Yes, sir, that is right, we do, Mr. Schwabe, but whether there is a coincidental relationship or a causal relationship there we do not know definitely.

Mr. SCHWABE. I was just wondering what your latest judgment was on that.

Dr. VAN SLYKE. We rather think that is a coincidental thing, Mr. Schwabe, but back of that you can get down to actual blindness because of the changes of the vessel in hemorrhage within the eye. There is no doubt about that, Mr. Schwabe, that happens all too frequently from high blood pressure.

Mr. SCHWABE. But there is still a question as to whether cataracts necessarily result from the coincidental circumstances incident to heart disease.

Dr. VAN SLYKE. We do not know definitely, Mr. Schwabe.

Being conservative, at present we say we would be willing to consider it as coincidental.

Mr. SCHWABE. I think that is all, Mr. Chairman.

Mr. FOGARTY. Mr. Busbey.

RELATIONSHIP OF CHOLESTEROL IN BLOOD STREAM AND HIGH BLOOD PRESSURE

Mr. BUSBEY. Doctor, what relationship is there between cholesterol in the blood stream and high blood pressure?

Dr. VAN SLYKE. There is probably no direct relationship, Mr. Busbey. If the high blood pressure is due to a narrowing of the lumen of the vessel, so that the heart is pumping harder to get the blood through them it would have a direct relationship.

On the other hand some high blood pressure can be due to the spasticity of the vessel, the muscular elasticity being cut, which pulls it down. I would say that in that type of arteriosclerosis, which is associated with a pipe like rigidity and hardening of the vessels that cholesterol probably plays a very important part in high blood pressure.

Mr. BUSBEY. Doctor, in your opinion, why is it that the doctors in blood tests nowadays put so much emphasis on cholesterol where they did not a few years ago?

Dr. VAN SLYKE. I am very glad to hear you say that they do put emphasis on it, Mr. Busbey, because that shows that they are alert to the developments which are taking place in the research field.

Just what the real importance of cholesterol is by itself we do not know. We have to know a lot of things about these matters, and we are trying to put them together.

Number one is how is cholesterol in the blood, is it there uncombined as cholesterol, or is it cholesterol which has been joined up chemically and merged within the body; how much cholesterol is there in relation to other components, and what is the relationship of cholesterol to other fat particles in the blood? One of the most thrilling developments is what is the relationship of cholesterol to these giant Lipo protein molecules which Dr. Gofman described, and which he holds are very definitely related either in terms of cause or as an indication as to what goes on in the system.

These Lipo protein molecules, as you probably recall, do contain cholesterol. There is a large component of it in these molecules.

Frankly, let me admit not only my own ignorance as to that, but that of all scientists concerned with it. We just do not have the final answers yet, but we are getting them, we are finding things out almost day after day.

This is the most thrilling and dynamic research field that you can possibly imagine.

I am just sorry that you gentlemen are not in my business to share in this development a little more technically, I should say.

You do share in it all right, because without the support you give us we just would have to stop this kind of research.

Dr. TOPPING. There was an editorial in this month's AMA Journal which said almost exactly what Dr. Van Slyke has already said, pointing out the tremendous amount of progress which has been made in the Lipo protein molecules, and particularly cholesterol within the past year or 2 years.

The answers to those questions are not there at the moment, but many pieces of information that are needed have been accumulated from time to time. It is a very enthusiastic editorial indicating a great deal of hope for solution of the problem within a reasonable length of time.

Mr. SCHWABE. May I ask a question off the record.

(Discussion off the record.)

Mr. FOGARTY. Do you have any further statement to make, Doctor?

COOPERATIVE RELATIONS WITH OUTSIDE ORGANIZATIONS

Dr. VAN SLYKE. Mr. Chairman, I should like to reiterate again that in the past year we have had very excellent cooperative relations with the American Heart Association and the Association of American Medical Colleges. Our program has gone along with them in excellent shape.

There is a tremendous number of things that remain to be done. The many discoveries that we have made have created just that many more problems.

We feel that the sympathy and the support which this committee has given to us in the past has paid off and that it will continue to pay off in the future.

I might say that this budget figure here is the base line for my observation, and any decrease in it will mean the loss of time, the loss of observation, and those observations cannot be made up by increasing our support at a future time.

On the other hand, if this amount of funds be increased we can continue in our attack on this problem and save time.

I read last night before going to bed an article in this month's Reader's Digest about General Sarnoff. In the depths of the depression in 1932 he, almost alone, was responsible for starting the putting of $50 million into research for electronics, which eventually gave us television, and which he considers only the beginning of advances in electronic engineering.

We feel the same way about the fight against heart disease, and against all disease, in fact, that if we can continue to get your support for research, with due consideration of all of the demands upon you gentlemen for funds for other purposes, if we can continue to have your loyal support in breaking this thing down, you will find that it will pay dividends far beyond the amount in dollars involved. As General Sarnoff says this is not only the time for brave men but for "brave" dollars.

Thank you, sir.

Mr. FOGARTY. Thank you very much, Doctor.

FRIDAY, FEBRUARY 1, 1952.

DENTAL HEALTH ACTIVITIES

WITNESSES

DR. BRUCE D. FORSYTH, ASSOCIATE CHIEF, BUREAU OF MEDICAL SERVICES
DR. H. TRENDLEY DEAN, DIRECTOR, NATIONAL INSTITUTE OF DENTAL RESEARCH
DR. JOHN W. KNUTSON, CHIEF, DIVISION OF DENTAL PUBLIC HEALTH
DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY. L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,954,850	$1,598,654	$1,936,000
Proposed supplemental due to pay increases		47,000	
Total available for obligation	1,954,850	1,645,654	1,936,000
Unobligated balance, estimated savings	−4,514		
Obligations incurred	1,950,336	1,645,654	1,936,000
Comparative transfer to "Assistance to States, general, Public Health Service"	−9,400	−9,000	
Total obligations	1,940,936	1,636,654	1,936,000

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
1. Grants:			
(*a*) Grants for research and training:			
(1) Research projects	$218,400	$221,000	$221,000
(2) Research fellowships	51,378	50,000	50,000
(*b*) Special cooperative projects with States in water fluoridation			250,000
2. Direct operations:			
(*a*) Research	338,059	345,454	406,000
(*b*) Other direct operations:			
(1) Review and approval of research and training grants	10,612	12,900	11,500
(2) Technical assistance to States	1,137,805	819,000	816,000
(3) Coordination and development of dental resources	124,883	126,500	126,000
(4) Administration	59,799	61,800	55,500
Total obligations	1,940,936	1,636,654	1,936,000

Obligations by objects

Object classification	1951 actual	1952 estimate	1953 estimate
Total number of permanent positions	267	199	210
Full-time equivalent of all other positions	6	7	7
Average number of all employees	242	196	196
Average salaries and grades:			
General schedule grades:			
Average salary	$3,431	$4,215	$4,280
Average grade	GS–4.9	GS–5.8	GS–5.9
Crafts, protective, and custodial grades:			
Average salary	$2,540		
Average grade	CPC–2.0		
Ungraded positions: Average salary	$4,600	$4,600	$7,130
01 Personal services:			
Permanent positions	$1,073,006	$981,237	$1,022,332
Part-time and temporary positions	16,448	19,850	21,000
Regular pay in excess of 52-week base	0	2,169	2,373
Payment above basic rates	5,015	3,168	3,235
Total personal services	1,094,469	1,006,424	1,048,965
02 Travel	203,055	115,670	111,733
03 Transportation of things	19,377	10,985	15,785
04 Communication services	4,132	5,820	6,020
05 Rents and utility services	2,048	1,780	1,780
06 Printing and reproduction	17,076	15,810	16,610
07 Other contractual services	22,832	11,170	16,620
Reimbursement to "Operating expenses, National Institutes of Health, Public Health Service"	96,376	79,680	96,880
08 Supplies and materials	124,746	82,580	70,450
09 Equipment	88,539	37,635	31,955
11 Grants, subsidies, and contributions	269,778	271,000	521,000
15 Taxes and assessments	1,208	800	920
Subtotal	1,943,636	1,639,354	1,938,700
Deduct charges for quarters and subsistence	2,700	2,700	2,700
Total obligations	1,940,936	1,636,654	1,936,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$242,650	$274,586	$181,474
Obligations incurred during the year	1,950,336	1,645,654	1,936,000
	2,192,986	1,920,240	2,117,474
Deduct:			
Unliquidated obligations, end of year	274,586	181,474	206,000
Adjustment in obligations of prior years	3,445		
Total expenditures	1,914,955	1,738,766	1,911,474
Expenditures are distributed as follows:			
Out of current authorizations	1,736,260	1,420,000	1,730,000
Out of prior authorizations	178,695	274,586	178,654
Out of anticipated 1952 supplemental for pay increases		44,180	2,82

Mr. FOGARTY. The committee has before it the estimates for dental health activities.

Dr. Forsyth, do you have a prepared statement?

GENERAL STATEMENT

Dr. FORSYTH. No, sir; I have no prepared statement, Mr. Chairman, but I would like to make some remarks for the record.

Mr. Chairman, and members of the committee, it is almost 4 years ago that the Congress passed the National Institute of Dental Research Act. The passage of this act followed recognition of the fact that dental diseases, particularly tooth decay and pyorrhea, were of universal prevalence, and that $1,000,000,000 was being spent annually by the public to treat these diseases and repair damages following in their wake, and that little money and effort, extremely little money and effort was going into research for methods to prevent dental diseases.

It had become obvious, not only that the treatment and reparative approach to dental diseases was expensive, but it was impractical and unrealistic, since less than one-third of our population was obtaining, or could obtain anything like adequate dental treatment and services.

EFFECT OF DENTAL DEFECTS ON MILITARY NEEDS

These facts were objectively and dramatically brought out during World War II.

For instance, of the first 2,000,000 men that were examined during World War II, 20 percent of the physical rejections were due to dental defects. To get enough manpower for the services it was necessary to take dental cripples.

Serious dental manpower problems occurred in connection with attempts to serve the military needs through reparative and treatment methods.

COST OF DENTAL SERVICE TO VETERANS IN PAST 3 YEARS

Immediately following World War II the demand for contract dental services for veterans increased. During the past 3 years the cost for contract dental services for veterans, the cost to the taxpayer has been over $100 million.

Mr. DENTON. That is the cost for service given veterans by dentists?

Dr. FORSYTH. Yes, that cost over $100 million in the past 3 years. That is the cost to the taxpayers, and that does not include any dental service received in any Government hospital from the Army, the Navy, the Air Force, the Veterans' Administration, or the Public Health Service.

Mr. FOGARTY. That is when they go to a dentist and then the dentist is reimbursed for that service?

Dr. FORSYTH. Yes, and that is a load on the taxpayer.

So that the magnitude and the nature of the problem is certainly clear-cut, and the concept of approaching a solution of the problem through research, with the development of preventative methods to replace the treatment method, and how to effectively apply these preventive methods was set forth in the purposes of our Dental Research Act.

PROGRAM CURTAILMENT DUE TO LACK OF FUNDS

To carry out the purposes of the act Congress authorized the appropriation of $2,000,000 to equip and to construct a suitable building for the Dental Research Institute.

The act also authorized a yearly appropriation for dental research for the training of research personnel, and to enable the Public Health Service to cooperate with the State health agencies in the prevention and control of dental diseases and conditions.

That authorization, by the way, was for a ceiling of $750,000. It was never approached, and, incidentally, it has been removed.

Funds for the construction of the building have not been forthcoming from the Congress although they have been authorized, and actually the funds for carrying out the other purposes of the act have increased only slightly since the enactment of it.

ACHIEVEMENTS THROUGH USE OF FLUORIDES

We would be very happy for the opportunity at this particular time to review with you briefly some of the accomplishments that the Public Health Service has been able to achieve by use of the funds that Congress has made available to us for dental health activities.

Outstanding among these achievements has been the development of two practical uses of fluorides in the prevention of tooth decay.

TOPICALLY APPLIED FLUORIDES

The first of these, topically applied fluorides is a method designed to expose the crown surface of the teeth, the part of the teeth normally found above the gum, to the action of 2 percent aqueous solution of sodium fluoride. This method will reduce new tooth decay by 40 percent.

CONTROLLED FLUORIDATION

The other use of fluoride is that of adding it to the drinking water supply to an optimum concentration of 1 part of fluoride to 1,000,000 parts of water. Now, that is called controlled fluoridation, and it is a development following several decades of dental research. It began with observations made in various communities which had varying amounts of fluorides in their water supplies, comparing the incidence of tooth decay in these areas with communities which had no fluorides in their community water supply, and it was found that the communities that had fluorides occurring naturally had less tooth decay.

PILOT-PROGRAM STUDIES OF FLUORIDES IN WATER SUPPLY

The next step was extensive studies carried on with animals with varying amounts of fluorides in their drinking water supply, and then, finally, a series of pilot programs.

The Public Health Service was the pioneer in studying the use of fluorides, and it was largely through the efforts of the Public Health Service that these two remarkable preventatives of tooth decay were developed.

I would like at this time to mention a personal letter that was received by one of our Public Health Service officers. Off the record.

(Discussion off the record.)

Mr. FOGARTY. You may put that letter in the record.

Dr. FORSYTH. All right, we will insert it in the record.

(The matter referred to is as follows:)

Dr. Kenneth F. Maxcy, professor of epidemiology, Johns Hopkins University, and chairman of the National Research Council's Committee on Fluoridation of Public Water Supplies, recently wrote to Dr. H. Trendley Dean, Director, National Institute of Dental Research, a letter which in part said:

"May I take this occasion to say something which I have had in mind for some time. As chairman of this committee, I undertook to review the literature on fluoridation of water supplies. I had never fully appreciated the contribution which you and your colleagues have made to this subject through epidemiological investigations. Now that I have become better acquainted with these studies, I am fascinated by their excellence and their value. To my mind, they now represent one of the outstanding contributions to medical and dental science made by the epidemiological method in the past half century. Please accept my hearty congratulations on your achievement."

It might also be noted that for this work developing the epidemiology of fluoride domestic waters and dental caries Dr. Dean has received the Gorgas medal (only living USPHS officer with this award), the John M. Goodell prize, and the Jarvie gold medal award, the first time ever given to a dental officer of any of the services.

Dr. FORSYTH. Now, we first started the pilot program study in the United States at Grand Rapids, Mich., in cooperation with the Michigan Department of Health. Others were soon started. These programs were designed to determine the effects of adding fluorides to the drinking water supply, and led to the conclusion that controlled fluoridation is an effective, safe, and practical method of reducing the incidence of tooth decay by two-thirds.

RESULTS OF GRAND RAPIDS STUDY

At this point, I would like to show you some charts that we have showing some of the results of the Grand Rapids study over the past 6 years, and also to a study conducted on adults in the Colorado Springs area, which happens to have natural fluoridation.

I think you can all see this first one. This is the age group down here [indicating]. This is deciduous teeth [indicating].

This is Grand Rapids before putting fluorides in their water supply.

This is Aurora, Ill., which has fluorides occurring naturally in their drinking water supply. It had 1.2 parts per million. This is Grand Rapids after we put fluorides in the drinking water supply.

There we found that in a little over 6 years the 4-, 5-, and 6-year age groups which have been on it all their lives actually are slightly below the rate of Aurora which has had it naturally.

EFFECTIVENESS OF FLUORIDE TREATMENTS

Mr. FOGARTY. This is the first time that anything has ever been discovered that prevents caries in teeth, is it not?

Dr. FORSYTH. Yes; except that topically applied fluorides reduce it 40 percent.

Mr. FOGARTY. Yes.

Dr. FORSYTH. This shows the results on permanent teeth, and it has only been in effect 6 years.

This shows the decay rate in permanent teeth in Grand Rapids before fluoridation, and this shows Aurora, Ill., which has naturally occurring fluorides, and the important thing again is in the 11-year-olds, who were 5 years olds when it started also benefited [indicating]. In other words, there was better than a 50-percent reduction in tooth decay.

To get the full maximum benefit a child must have been born and reared on it, but even at 16 years of age you are still getting a benefit from it.

FACTORS CONSIDERED IN FLUORIDE STUDIES

Mr. SCHWABE. Are those individual cases or groups?

Dr. FORSYTH. Oh, these are groups.

Mr. SCHWABE. What sized groups?

Dr. FORSYTH. Not less than 3,500.

Dr. DEAN. About 7,000 for the 1951 curve.

Mr. SCHWABE. You mean that they have been examined?

Dr. FORSYTH. There has been a yearly examination.

Mr. SCHWABE. By the same individuals?

Dr. FORSYTH. I think it is by the same investigators.

Dr. DEAN. Yes, and are continuous residents.

Dr. FORSYTH. Yes.

Mr. SCHWABE. Of course, you would not say that is the only cause that has prevented tooth decay.

Dr. FORSYTH. I do not understand.

Mr. SCHWABE. There might have been other contributing benefits, such as better care of teeth.

Dr. FORSYTH. Well, Muskegon, Mich., is a good example where we did not add fluoride to the water supply. The dental decay rates there are about as they were in 1944–45.

Mr. SCHWABE. I can appreciate that, but I say you have not necessarily eliminated all other factors that might have entered into the results, have you?

Dr. FORSYTH. No; I do not see how that would be possible.

Mr. SCHWABE. You do not?

Dr. FORSYTH. No, sir; I do not.

Mr. BUSBEY. I think what Mr. Schwabe has in mind is the fact that while this program was going on in Grand Rapids there must have been some publicity given to it and the people were conscious of it, and paid more attention to their teeth than they did in other cities.

Mr. SCHWABE. And they went to the dentist oftener and had their children wash their teeth oftener and took other precautions, perhaps, with reference to the diets, in which there have been great improvements.

Dr. FORSYTH. I might tell you, Mr. Schwabe, that there is a difference in the appearance of the teeth, and no one can question the value of adding fluorides in drinking water. You see that in adults as well who have lived on it all of their lives.

Another officer and myself happened to be coming back from Chicago not long ago, and the stewardess came along and smiled, and so we said, "By the way, where were you born?" She told us she was born in a small town in the southern part of Illinois. We happened to know that that town had fluorides naturally occurring in its drinking water supply, and we said, "Did you know that your town had fluoride in its drinking water supply?" She said, "Oh, yes, I have been told a number of times what wonderful teeth I have." We asked about her family, and she said she had one other sister who had the same type of teeth.

Mr. SCHWABE. Well, I happen to know, and I know that you will agree, that in certain large families that same wide variation or difference occurs among children who have paid equal attention to their teeth, who had identically the same diet and everything as far as we are able to determine and yet one youngster grows to manhood without ever having any bad teeth or experiencing any trouble, and another one brought up under the same conditions has all kinds of trouble.

Dr. FORSYTH. Yes. That is one of the reasons for increased research efforts; we have not found the answer to it.

Mr. SCHWABE. Yes, I appreciate that, but when you draw your analogy I do not think it is perfect and conclusive in view of the fact that identical situations may reveal different results in other cases.

Dr. FORSYTH. We know that diet can control tooth decay, but you have to go out where you know the situation where you control diet.

Mr. SCHWABE. Just so it is properly supervised.

Mr. HARLOW. I have just one comment, which I think would serve to modify your statement, which is that we have so many cases involved in this particular study that the average certainly is almost conclusive.

Mr. SCHWABE. All right.

Dr. FORSYTH. You see, there are several other places which have been carrying on these studies. Newburgh, N. Y., has been carrying on a study, and they have been carrying on studies in Evanston, Ill.,

Sheboygan, Wis., and Marshall, Tex. The have all come up with the same conclusions. It is not just the Public Health Service at all.

PERCENTAGE OF TOOTH DECAY REDUCTION BY AGE GROUPS

I wanted to show you the actual reduction in the tooth-decay rate in the various age groups.

Here is a child 6 years old, brought up on it, and there is a 65 percent reduction, as I told you previously, while take a 9-year-old, who was 3 years old at the time it was introduced, and those in that group have had a 40-percent reduction in tooth decay, and even your 16-year-old has had a 16 percent reduction in the tooth-decay rate.

Then, this carries over into adult life. Some investigators went out to Colorado Springs, Colo., which has 2½ parts of fluoride per million in its drinking water supply. They examined the adults in the 35- to 44-year age group, and they examined the same age groups in Boulder, Colo., which had no fluoride in its drinking water supply. This benefit is carried over into adult life. This [indicating] was Colorado Springs, and the amount of tooth decay there actually was about 2½ times less than the amount found in Boulder which has no fluoride in its water supply. In that study we eliminated all adults who did not live there continuously except for short vacations periods.

This [indicating] shows the tooth loss in adults in Colorado Springs here as compared with Boulder. There is 75 percent less loss of teeth in Colorado Springs which has fluoride in its water supply, as compared to Boulder, which has no fluoride in its water supply.

Are there any questions on any of this?

We feel that the results clearly demonstrate that the addition of fluorides to communal water supply returns the same benefits as when it occurs naturally in the drinking water supply.

These and other extensive research findings on fluoride in relation to tooth decay led more than a year ago to the endorsement of this remarkable preventative not only by the Public Health Service, but also by the American Dental Association, the American Public Health Association, the State and Territorial Dental Directors Association, the Association of State and Territorial Health Officers, the National Research Council, and more recently the American Medical Association.

As Dr. Scheele indicated in announcing the endorsement of the Public Health Service, here is a mass procedure for reducing tooth decay by two-thirds.

TRENCH-MOUTH RESEARCH

Briefly, some of the other accomplishments that we have achieved in basic research development and applied research include the development of media for the isolation of the organism associated with trench mouth, that has been a considerable military problem for some time.

SODIUM SALT FOR FLUORIDATION

We have demonstrated a cheaper, more abundant sodium salt than sodium fluoride for use in the fluoridation of communal water supplies; a simpler, more effective, more definite test for fluorides.

DEFLUORIDATION DEVELOPMENTS

Also, we have developed more effective defluoridation materials and methods. Some of the communities throughout the United States have too much fluorides in their drinking water supplies.

Mr. SCHWABE. Where, for instance? Will you give us a few instances of that kind?

Dr. FORSYTH. We have found it in Britton, S. Dak., and Bartlett, Tex. They run about 8 parts of fluoride to 1 million parts of water.

EFFECT OF FLUORIDE OVERDOSES

Mr. DENTON. Does that ruin the teeth when they get too much

Dr. FORSYTH. Well, for instance, with eight parts you will get a brown stain on the teeth. From an esthetic standpoint it becomes a serious problem to both children and adults.

Mr. SCHWABE. That is the primary ill effect?

Dr. FORSYTH. It depends. If it goes higher the hard covering of the tooth itself can become denuded. I have seen cases of mottling of the enamel. You have an esthetic factor coming in there.

Through the demonstration of the topically applied techniques in a little over 1,200 communities in the United States it has led to the commitment of over 500 continuing community programs.

MULTIPLE-CHAIR-TECHNIQUE DEVELOPMENT

We have developed the multiple-chair technique in the use of topical fluoride application, which has actually led to cutting down on the cost of the program. In other words, by that means we can treat four children in the time it previously took to treat one child.

The same program has demonstrated the expanding use of auxiliary personnel. Where you have a short supply of dental manpower, such as top-flight dentists who would have to do the job we have found dental hygienists could apply the solution.

Mr. SCHWABE. You say that it requires a dentist to do it?

Dr. FORSYTH. Some of the State laws require it, and until a State hygienist was trained to do the job a dentist had to do it. In connection with our studies on children we found that by using the multiple-chair technique we can still train assistants and that a dentist can double his productivity.

Mr. SCHWABE. There is not any reason why just an ordinary school or community nurse could not do it; is that true? Dentists tell me that, and I think they are honest about it.

Dr. FORSYTH. I would say they would have to be under supervision. Cotton rolls are laid on the mouth, and the solution is put on the teeth. If that solution is absorbed by the cotton you do not get the benefit of it, so you do have to have some supervision, I think.

ORTHOMETER DEVELOPED FOR MEASURING DEGREE OF MALOCCLUSION

We have developed an orthometer, which is an inexpensive device for measuring the degree of malocclusion.

Mr. DENTON. What is malocclusion?

Dr. FORSYTH. That is a good question, Mr. Denton. If you go into malocclusion you will get an argument among some people on this, but actually there is no good definition of it today except the definition in relation to the upper first molar and the lower first molar, that they do not meet.

Mr. HARLOW. The teeth do not meet.

Dr. FORSYTH. The teeth do not meet, or they are too far back, and so forth.

As to the amount of malocclusion in this country, the estimates have varied all of the way from 15 percent in children to over 60 percent.

INCREASED TRAINING SCHOOLS FOR DENTAL HYGIENISTS

An indirect accomplishment that has been achieved has been since the topical-fluoride program has been in operation the number of training schools for dental hygienists has increased from 15 to 27 due to the demand for their services.

When this first started a good many of the States did not give licenses to dental hygienists. Today every State in the United States, the District of Columbia, and Hawaii license dental hygienists.

ACHIEVEMENTS IN RESEARCH FELLOWSHIP PROGRAM

I might say, too, that in all the research-fellowship program, one of the outstanding achievements there has been the fact that of the 12 fellows we have supported and who have completed that program not one of these men has been lost to the research or teaching (pathological) field.

ACTIVITY PROGRAMS INCLUDED IN BUDGET ESTIMATE

The work in progress includes the continuation of research, and of our developmental studies and of our programs that were already referred to, and a small research grant and fellowship program, and very limited funds for basic laboratory and field research.

We are also doing a little bit on the problem of fluoridation of communal-water supplies.

Our project-work plan which you have in the budget before you will allow us to continue the work already in progress, but at a restricted level, except in two instances, those for clinical dental research and for grants to States.

EFFECT OF OPENING NEW CLINICAL CENTER

Just briefly, I would like to mention that the opening of the new clinical center will enable the Public Health Service for the first time to tie clinical research, basic research, and the patient close together. That concerns all of the institutes, not just the Dental Institute.

With the opening of the clinical center it will also enable us to coordinate with the other institutes there. It will also enable us to study the relationship of dental disease to such systemic diseases as heart disease and arthritis. It will also enable us to tie clinical research on pyorrhea close to basic research.

Pyorrhea, by the way, is the most prevalent dental disease occuring in adults. It is the greatest cause of loss of teeth in adults and the need for reparative and replacement services in adults.

It will also allow us to begin a study on the nature of such things as cleft lip and cleft palate. These two congenital defects are the most prevalent of all congenital defects. They occur once in every 600 persons.

BUDGET REQUEST FOR STATE GRANTS TO EXPEDITE WATER-FLUORIDATION PROGRAM

The other increase is for project grants to States to assist in speeding up the fluoridation of communal-water supplies.

VALUE OF WATER FLUORIDATION

Water fluoridation is the most remarkable preventative measure developed in the history of dentistry. It is almost an ideal public-health measure. It is safe, it is inexpensive, and effects a two-thirds reduction in tooth decay. A person born and reared in the community will receive the benefits just by living there and drinking the water. In my opinion, it is the most important preventative public-health development which has been developed in this country.

REASON FOR SLOW PROGRESS OF FLUORIDATION PROGRAM

A conservative estimate of its money value besides its health benefits is that one dollar spent for water fluoridation prevents the need for spending 60 to 70 times that amount for dental care later on. Although this remarkable preventative has had the approval of virtually all the national health agencies in the United States for about the past year and a half, progress has been extremely slow. We have traced this to the lack of adequate promotional, informational, and technical service in the State health departments.

In fact, in most instances the job has been turned over to an already overworked, undermanned staff.

PERCENT OF NATION'S WATER-SUPPLY SYSTEM FLUORIDATED

Of the 16,750 communal water-supply systems in the United States, only 1 percent is now fluoridated. Less than 100 started in the past year, so that at that rate of progress it is going to take over 100 years to do the job.

Because the fluoridation of communal water supplies is such an important public-health preventative, and because it will serve as an investment which will save millions of dollars to the taxpayers in years to come this job of the fluoridation of communal water supplies must be expedited.

STATE HEALTH DEPARTMENT PERSONNEL REQUIREMENTS

In order to get the job done there is a minimum need in State health departments for an engineer, a chemist, a technical aide, and a dentist who can devote full time to the fluoridation of communal water supplies.

Over 90 percent of the water supplies in this country serve populations of 10,000 or less, and that means that in 9 out of 10 communities the waterworks operator is not a trained engineer, a qualified engineer, and service must be obtained from the State water system and to plan and draw up specifications for a fluoridation program and to provide training for the local waterworks operator.

CHEMICAL-SERVICE REQUIREMENTS

Chemical services are essential from a State health-department source so tests of fluorine content of drinking water can be made prior to consideration of fluoridation, to train the local waterworks operator to make chemical tests to be sure that the right amount of fluoride is going into all parts of the system, and then also to make periodic checks in the State health-department laboratories. Technical aid is necessary to render emergency service from some central source.

Now, obviously, the amount requested to assist the States in providing these services at the earliest possible moment will be only a relatively small contribution to the salaries, equipment, and operating costs of the staff, but it will serve as tangible evidence of the interest and support of the Federal Government in expediting the fluoridation program.

It will also serve as a contribution to the State health departments to supply technical and supervisory service to the communities, and it will serve as a strong stimulus to the whole water-fluoridation program.

The sum requested is a very small investment in a program which can assure a two-thirds reduction in new tooth decay, that can insure a marked improvement in the dental health of our Nation, and a saving of millions of dollars, and eventually billions of dollars in years to come which otherwise would be used for the rendering of dental services.

It is my opinion that it is not a question of can we afford to do this job. It is a question of can we afford not to do it.

That is all, Mr. Chairman.

Mr. FOGARTY. Thank you, Doctor.

NUMBER OF PUBLIC WATER SUPPLIES AND COMMUNITIES FLUORIDATING SYSTEMS

Dr. FORSYTH. I would like to have this inserted in the record, Mr. Chairman. It is a statement showing the number of public water-supply systems in the United States, and the number of communities that are fluoridating.

Mr. FOGARTY. It may be included in the record.

(The matter referred to is as follows:)

	Number of communities fluoridating public water supplies	Number of public water-supply systems		Number of communities fluoridating public water supplies	Number of public water-supply systems
Alabama	1	314	Nevada	0	38
Arizona	0	88	New Hampshire	0	118
Arkansas	2	184	New Jersey	1	451
California	2	490	New Mexico	0	97
Colorado	1	207	New York	6	1,261
Connecticut	4	196	North Carolina	4	360
Delaware	1	40	North Dakota	0	111
District of Columbia	0	1	Ohio	3	621
Florida	4	339	Oklahoma	1	348
Georgia	2	356	Oregon	1	340
Idaho	1	174	Pennsylvania	2	1,613
Illinois	2	712	Rhode Island	0	74
Indiana	4	366	South Carolina	3	232
Iowa	2	587	South Dakota	1	195
Kansas	2	384	Tennessee	4	220
Kentucky	5	301	Texas	8	930
Louisiana	0	221	Utah	0	200
Maine	0	193	Vermont	0	156
Maryland	2	159	Virginia	1	411
Massachusetts	4	263	Washington	1	359
Michigan	16	458	West Virginia	3	551
Minnesota	7	510	Wisconsin	64	352
Mississippi	1	216	Wyoming	1	70
Missouri	0	355			
Montana	0	115	Total	169	16,747
Nebraska	2	410			

AMOUNT OF BUDGET REQUEST

Mr. FOGARTY. Dr. Forsyth, in 1952 you estimate you will have available $1,636,000, and for 1953 you are asking for $1,936,000, an increase of $300,000?

Dr. FORSYTH. Yes, sir.

PERSONNEL INCREASE

Mr. FOGARTY. You had 199 positions in 1952, and you are asking for 219 for 1953, an increase of 20?

Dr. FORSYTH. Yes, sir.

Mr. FOGARTY. There are 21 positions for the Clinical Center at Bethesda; is that correct?

Dr. FORSYTH. Yes, sir.

BREAKDOWN OF NEW POSITIONS

Mr. FOGARTY. Will you put in the record a breakdown of those positions, and as I have asked the other institutes to do, give us a proposed breakdown of the number that you anticipate will be needed in 1954?

Dr. FORSYTH. Yes, sir.

Mr. FOGARTY. Put that in the record.

Dr. FORSYTH. Yes, sir.

(The matter referred to is as follows:)

National Institute of Dental Research, breakdown of new positions, fiscal year 1953

Title	Grade	Positions	Net amount
Clinical investigations:			
Clinical director	GS-16	1	$5,440
Bacteriologist	GS-13	2	3,344
Administrative assistant	GS-9	1	1,012
Biological aid	GS-5	2	1,364
Dental technician	GS-5	1	682
Secretary	GS-5	1	682
Biological aid	GS-4	2	1,270
Physical science aid	GS-4	1	635
Biological aid	GS-3	1	590
Grades established by act of July 1, 1944 (42 U. S. C. 207):			
Director grade		1	2,001
Full grade		2	6,976
Senior grade		1	3,984
Senior assistant grade		2	4,396
Subtotal		18	32,332
Visiting scientist	Unclassified	3	6,160
Net permanent		21	38,492
Regular pay in excess of 52-week base			320
Part-time and temporary employment			500
Net cost, new positions			39,312
Other objects			24,988
Net obligations, new positions			64,300

Projected costs for these projects in 1954 are estimated at 30 positions and $220,000, after allowing for a lapse of approximately 25 percent on new positions. These figures exclude costs of supporting research services reflected in the Clinical Center table for operating expenses, NIH.

AMOUNT REQUESTED FOR GRANTS TO STATES

Mr. FOGARTY. One of the requests you are making is a request for $250,000 for grants to States for the fluoridation program.

Dr. FORSYTH. Yes, sir.

BASIS FOR ESTIMATE

Mr. FOGARTY. This is what you have just finished talking about. On what basis will the amount to be expended—some formula for each State's allocation?

Dr. FORSYTH. We want each State to have an equal opportunity to compete for the money. The ideal plan would be to have a chemist, an engineer, a technical man, and a dentist in each State health department.

Mr. FOGARTY. Where is this $250,000 broken down?

Dr. FORSYTH. Here is what we would do, Mr. Fogarty. If the money is appropriated by the House, shall we say, we want these dental consultants in the various regions to go around to the State health boards and to help them in their plans, which would include what they could do, and what the Federal Government could contribute to them to get a chemist or an engineer to get this job going. Those plans could be submitted to the State health department and the Public Health Service so that if the money were available the plans could be approved or we could disapprove them.

ESTIMATED COST OF PAY ACT

Mr. FOGARTY. You are asking for a supplemental of $47,000 in 1952. What do you anticipate the total increased cost to be for the pay act for 1952?

Dr. FORSYTH. $53,000.

Mr. FOGARTY. So, you are absorbing $6,000?

Dr. FORSYTH. Yes, sir.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. FOGARTY. What did you ask the Bureau of the Budget for?

Dr. FORSYTH. $4,112,000. That did include our supplemental.

Mr. FOGARTY. Will you put a breakdown of that in the record.

(The matter referred to is as follows:)

Project	1953 agency estimates		1953 Budget Bureau allowance	
	Positions	Amount	Positions	Amount
GRANTS				
Research grants		$500,000		$221,000
Research fellowships		175,000		50,000
Special cooperative projects with States in water fluoridation		1,800,000		250,000
Total grants		2,475,000		521,000
DIRECT OPERATIONS				
Research:				
Basic	47	337,231	41	276,170
Supporting:				
Scientific reports	(1)	11,940	(1)	12,240
Laboratory aids	(1)	28,530	(1)	28,450
Buildings management	(1)	23,475	(1)	24,840
Total basic	47	401,176	41	341,700
Clinical center:				
Clinical investigations	23	63,640	18	35,000
Visiting scientists	6	7,820	3	7,000
Supporting laboratory areas	(1)	28,900	(1)	17,200
Relocation of projects	(1)	6,000	(1)	5,100
Total clinical center	29	106,360	21	64,300
Total research		507,536	62	406,000
Review and approval of grants	1	11,895	1	11,500
Technical assistance to States	128	840,188	128	816,000
Coordination and development of dental resources	32	219,613	21	126,000
Administration:				
Program	7	42,573	7	41,350
Central services	(1)	15,195	(1)	14,150
Total administration	7	57,768	7	55,500
Total direct operations		1,637,000	219	1,415,000
Total obligations	244	4,112,000	219	1,936,000

[1] Reimbursement to "Operating expenses, National Institutes of Health, Public Health Service," under which positions are budgeted.

REGIONAL TEAMS

Mr. FOGARTY. How many of these administrative teams do you have at the present time?

Dr. FORSYTH. We do not have any administrative teams as such. We are supporting actually one topical fluoride program in addition to one team for each region, but we have switched over from sending

a team into a State to demonstrate and support the teams in the various regions. We might support a dental hygienist in one particular State or one in another State, so that the equivalent comes out one team per region.

REGIONS

Mr. FOGARTY. How many regions do you have, 10?
Dr. FORSYTH. Yes, sir; 10.
Mr. FOGARTY. So that it is the equivalent of 10 teams?
Dr. FORSYTH. Yes, sir.
Mr. FOGARTY. You are asking for a continuation of 10 teams in 1953?
Dr. FORSYTH. Yes, sir.
Mr. FOGARTY. That is what you had in 1952?
Dr. FORSYTH. It was about that level.
Mr. FOGARTY. How many teams did you have in 1951?
Dr. KNUTSON. In 1951 we supported 129 personnel; in 1953 we will be down to 42 people.
Mr. FOGARTY. They were broken down by teams in the last 2 or 3 years.
Dr. KNUTSON. Actually that would come out about 30 teams in 1951.
Mr. FOGARTY. How many did you have in 1950?
Dr. KNUTSON. About 37 or 38.
Mr. FOGARTY. Mr. Denton.

TRAINING PROGRAM FOR OPERATORS OF LOCAL WATER WORKS

Mr. DENTON. I was interested in your statement about the States not having engineers with which to carry out this program on the fluoridation of water. I made some inquiry about that, and I was told that probably was the case, but how are you ever going to solve this with one engineer and one dentist in a State?

Dr. FORSYTH. Through training the local waterworks operators in running them, during a training period of possibly 30 days, to familiarize them with all of the techniques which are essential to the operating of the program, and then you would have technical advisory assistance at the State level so that when a program comes up they can go to one central source for their consultation and technical advice, while the local waterworks operator would not need to be a trained engineer. In fact, a community that small cannot afford to put one on full time.

MACHINERY TO CONTROL FLUORIDE CONTENT OF WATER SUPPLY

Mr. DENTON. Is it safe to fluoridate this water unless you have a trained engineer or chemist there?

Dr. FORSYTH. Are you thinking of the danger of putting too much fluoride in the water supply?

Mr. DENTON. Yes.

Dr. FORSYTH. That is perfectly safe because the machines today are geared so that if anything goes wrong they feed less fluoride into the drinking water supply, but you do need technical aid there to install them.

Mr. DENTON. And you think in 30 days' time you could train these people who operate the plants?

Dr. FORSYTH. The average State has over 300 communities in it. You would not need to bring all 300 in at one time, but, rather, a small group at a time, a group of possibly 10 or 12 at a time, and you would have to pick out geographically certain areas within the State so that they do not have to travel too far.

Mr. DENTON. That is all.

Mr. FOGARTY. Mr. Schwabe.

FURTHER REFERENCE TO STATE GRANTS FOR WATER FLUORIDATION PROGRAM

Mr. SCHWABE. Doctor, I have been very much interested in this program from its inception, and I have been in thorough sympathy with the development of the program along lines that would give the most widespread application of the system to the greatest possible number. I am going to be frank in telling you to start with that I think a comparatively poor showing has been made for the amount of money that has been spent in a very simple program such as this.

Dr. FORSYTH. Are you referring to the topical fluoride program?

Mr. SCHWABE. I am referring both to that and the municipal water system fluoridation phase of it.

Dr. FORSYTH. We have not any money for the fluoridation of communal water supplies.

Mr. SCHWABE. Well, you have been advocating it, and you have been assisting communities to the extent of advising and counseling them, at least.

Dr. FORSYTH. Yes.

Mr. SCHWABE. Now you want to put personnel in there, or to subsidize personnel for the carrying on of this community water fluoridation work; is that not right?

Dr. FORSYTH. Yes, sir; they would become State health department employees.

Mr. SCHWABE. I appreciate that, but you are asking for $250,000 with which you will pay them; is that not right?

Dr. FORSYTH. As personnel; yes, sir.

Mr. SCHWABE. If the State will not pay anything you might pay it all?

Dr. FORSYTH. No.

BASIS FOR ISSUING GRANTS

Mr. SCHWABE. There is no formula or law for it; that would be up to your discretion; would it not?

Dr. FORSYTH. No.

Mr. SCHWABE. Then what is the yardstick that would be applied?

Dr. FORSYTH. I would feel that we would want each city to have an equal chance by announcing when the plans should be in. A deadline would be set, and then after you look at the plans, depending on the number requested, a determination would have to be made as to how much you could give, depending on the number of cities requesting them.

Mr. SCHWABE. And the number of communities.

Dr. FORSYTH. No; not the number of communities, because the average number of communities per State will run over 300.

Mr. SCHWABE. But in a lot of States they will not run over 300, as you and I well know.

Dr. FORSYTH. We have a list of them here, Mr. Schwabe.

Mr. SCHWABE. I know, but in Arizona you would not have 300, for instance.

Dr. FORSYTH. It only has 88, as a matter of fact.

Mr. SCHWABE. You are taking the average countrywide, instead of applying it to the individual States. Many States would have many more than 300, as far as that is concerned.

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. If you visited Arizona, they would perhaps be less able to finance a program locally or, we will say, you might afford them with a greater measure of help—put it that way. Is not that true?

Dr. FORSYTH. If Arizona came in at one time with other States, and they demonstrated a need for the service and wanted to move forward, I think they should be helped.

Mr. SCHWABE. But varying population usually enters into the bases used in formulas for grants to States, is not that correct?

Dr. FORSYTH. This would not be on a formula basis or on a matching-of-funds type of thing. Suppose you divide this amount of money that is here requested by the number of States and you come out with about $5,000 a State.

Mr. SCHWABE. What is going to be your suggestion to us, now, as a basis for distribution of the $250,000 if that sum is appropriated.

Dr. FORSYTH. As I said before, Mr. Schwabe, if the funds become available from the House——

Mr. SCHWABE. From the House and Senate.

Dr. FORSYTH. Yes, sir; by the House and Senate, we want our dental consultants who are in our regional offices to contact the State health departments and work with them on the drawing up of tentative plans for their needs within that State and tell us what they can conribute, and have the plan all ready to come in, and then set a deadline for it, depending, of course, on whether the money becomes available, so that we would then know the number of States who are willing to move ahead and the amounts requested.

Mr. SCHWABE. We would gather that the average State request may run $10,000 or $15,000 per State. Is that the ceiling, regardless of the number of communities to be served?

Dr. FORSYTH. I say that I think it should be determined on the need and the willingness to move ahead. If they have plans, if they want to move forward with respect to the water-fluoridation program but are blocked because of a lack of technical service available to the community, we would help them.

For instance, in your State of Oklahoma, which, of course, has 348 communities—and that is about the average—there is only one community in the State that is fluoridating their water today.

Mr. SCHWABE. I know that a number of communities are planning it, as far as that is concerned, and I hope that as many as can possibly do so will start the program. I have offered every encouragement possible, but I am not persuaded that this new program you suggest is the way to do it.

I, frankly, have been contacted by at least one or two members of a committee of the American Dental Association on this program, and they feel, as they expressed it to me, that it is high time that

the Federal Government be relieved of some of the burden and more of it shifted out to the States and the local communities. They have requested me to ask you a question which I think you have answered in a manner, perhaps, although you have not had the direct question presented to you, which is, "Do you think that the $250,000 you have requested here for this item which has been under discussion, is enough for the program, or if you think it is too much," and then give some reasons for your answers.

Dr. FORSYTH. Well, obviously, the amount requested here is not going to do the job as rapidly as the full amount requested would do it, but it is going to help to expedite it much more than if we do not receive the funds.

AMOUNT REQUESTED FROM BUDGET BUREAU

Mr. SCHWABE. How much was requested of the Bureau of the Budget for this item?

Dr. FORSYTH. $1,800,000.

Mr. SCHWABE. $1,800,000, and they reduced it to $250,000?

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. Of course, I think we will all agree that the sky is the limit. Nobody knows how much it would take to actually get the job done universally throughout the United States. It will cost more in some localities than in others. Some communities are in a more receptive attitude than others, or take less education, if I may put it that way, from your hands or those of any other group which seeks to bring home to them the importance of such a project or a program.

Now, I would like to ask you with reference to the application of fluorine to the teeth of children. There has been quite an amount spent on getting that part of the work started. Do you know about how much all told has been spent in that endeavor?

Dr. FORSYTH. Before I talk on that, Mr. Schwabe, may I tell you that the American Dental Association last year in the Senate strongly recommended that funds be made available for the fluoridation of communal water supplies.

Mr. SCHWABE. As I remember it, that is true in substance, but you also know that some of the leading members of the Association today are looking upon this with a great deal of skepticism, as they do upon the expenditure of as much money as you want made available to you for grants to States to hire personnel in connection with fluoridating water supplies.

Dr. FORSYTH. That is not the information we have, Mr. Schwabe. They have told us that they felt that money should be forthcoming for the support of the fluoridation of communal water supplies.

AMOUNT SPENT ON TOPICAL FLUORIDE PROGRAM SINCE 1949

Mr. SCHWABE. How much has been spent on this other part of the program?

Dr. FORSYTH. On the fluorine topically applied?

Mr. SCHWABE. Yes. I have not been using the technical terms that you have, because I want it so that we may all understand.

Dr. FORSYTH. In 1950 on the topical fluoride program——

Mr. SCHWABE. Was that the first appropriation for it?

Dr. FORSYTH. I think it was $1,000,000 for 1949. If that is not the correct figure we will correct it.

Mr. SCHWABE. Well, substantially.

Dr. FORSYTH. Substantially $1,000,000 in 1949. In 1950, $787,000; in 1951, $648,000, and for 1952, $202,000.

Mr. SCHWABE. That is the current year?

Dr. FORSYTH. Yes.

AMOUNT REQUESTED FOR TOPICAL FLUORIDE PROGRAM IN 1953

Mr. SCHWABE. What are you requesting for that particular division of your work for the fiscal year 1953?

Dr. FORSYTH. $199,000. We are paying the salaries of dental hygienists, and so forth; where they have a community program going, but they have not been able to pick up State funds to pay for them. That is the main type of thing. We are not sending teams around in individual States today through direct grants to the States.

ESTIMATED NUMBER OF DENTISTS ENGAGED IN TOPICAL FLUORIDE PROGRAM

Mr. SCHWABE. Do you have the 1951 report on the number of dentists used in this program?

Dr. FORSYTH. On topical fluoride, no, sir, I do not have.

Mr. SCHWABE. Could you make a rough guess as to how many are currently being used?

Dr. FORSYTH. Three out of forty-two people, that will be for 1953. For 1952 it would be 3 out of 43 people.

Mr. SCHWABE. When we speak of these as dentists we are referring now to 3 out of 42 of them?

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. As a rule they are men who are just out of dental school, are they not?

Dr. FORSYTH. No, sir, not necessarily.

Mr. SCHWABE. I have witnessed the fact that some of them are those who have never had any practice at all. I do not know how many. That is the reason I am asking the question if it has not been the custom. I do not know whether it has been or not.

Dr. FORSYTH. We have tried to get as inexpensive personnel as possible, but still well-trained personnel and, therefore, you have to go to your youngest men.

Mr. SCHWABE. I would assume that, because men who have lucrative practices and who are established are not going to quit their work and go into this as temporary employment.

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. And the same thing would be true with reference to the assistants or hygienists that you use in the same service.

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. I think that furnishes, a little more completely, support for my statement that the school nurse or the community nurse could do this job and do it without much training. I think I am supported in that by your testimony and those who have preceded you before this committee in saying that they could readily be trained to do it, that it would not necessarily take a dentist or a dental hygienist to do that work.

Dr. FORSYTH. We have been using the dental hygienists on our teams.

Mr. SCHWABE. I know, but I think we have agreed in the record here in the past that it would not necessitate one to go ahead with this program and apply fluorine to the teeth of the children in school and in groups like that.

Dr. FORSYTH. Actually, for instance, if you used a school nurse you would have to pay her more money than is paid a dental hygienist.

Mr. SCHWABE. If she is on the job there at a regular salary you say you would have to pay her more salary?

Dr. FORSYTH. In order to have her do the job, a full-time job, it would cost more to use a nurse than it would to use a dental hygienist.

Mr. SCHWABE. It might if you just went out and hired one, and maybe she would be better prepared to do it, as far as that is concerned, with very little training because she has a broader field of training, and may be worth more money.

Dr. FORSYTH. No, sir; I cannot agree with that, Mr. Schwabe, because she does not have the dental background that a dental hygienist would have.

Mr. HARLOW. May I make this statement off the record, Mr. Schwabe?

Mr. SCHWABE. Yes.

(Discussion off the record.)

DENTAL SERVICE IN NEW CLINICAL CENTER

Mr. SCHWABE. Then, I have been wondering what position you are going to occupy, I do not mean you individually, but your Institute but here in this new Institute of Health. Has space been assigned and a program been set up in this new Institute out in Bethesda for you?

Dr. FORSYTH. Dr. Topping.

Dr. TOPPING. In the center there is a wing on the first floor for the performing of routine dental service for the patients. The patients that come in for cancer, or for heart disease or mental disease, or what not, are going to require during the course of their treatment a certain amount of dental service.

In connection with that wing there has been assigned a certain amount of space in the wing for clinical investigations that have to do with patients that would be coming through that particular area.

No beds have been provided in the clinical center for patients per se.

Also, on one of the floors there has been set aside a wing for the basic research in the field of dentistry, just as there has been for mental disease, cancer, and for other services.

There is also at the National Institutes of Health a small amount of space in the present buildings for the dental research program which has been going on since Dr. Dean came with us, I think, early in the thirties.

Mr. SCHWABE. I think that is all.

Mr. FOGARTY. I have asked each of the other Institutes to place in the record the membership of their advisory councils. Would you do that for your council?

Dr. FORSYTH. Yes, sir.

(The information is as follows:)

NATIONAL ADVISORY DENTAL RESEARCH COUNCIL

Dr. Alvin Percy Black, department of chemistry, University of Florida, Gainesville, Fla. (term expires 1955).
Mrs. Mayola S. Center (Charles D.), 137 West Rugby, College Park, Ga. (term expires 1954).
Mr. Watson Davis, director, science service, 1422 Rhode Island Avenue NW., Washington, D. C. (term expires 1953).
Dr. C. A. Elvehjem, dean, graduate school, University of Wisconsin, Bascom Hall, Madison 6, Wis. (term expires 1954).
Mrs. Stephen J. Francisco, 115 Main Street, Little Falls, N. J. (term expires 1955).
Mr. Mark H. Harrington, attorney at law, the Equitable Building, Denver, Colo. (term expires 1953).
Dr. R. W. Harrison, vice president, University of Chicago, Chicago 37, Ill. (term expires 1952).
Dr. Harold C. Hodge, professor of pharmacology, University of Rochester School of Medicine and Dentistry, Rochester 20, N. Y. (term expires 1952).
Dr. Paul C. Kitchin, professor of dental histology and embryology, Ohio State University School of Dentistry, Columbus, Ohio (term expires 1952).
Dr. P. C. Lowery, Lowery Building, Burns at Gratiot Avenue, Detroit 13, Mich. (term expires 1953).
Dr. Francis J. Reichmann, 514 Medical Arts Building, Oklahoma City, Okla. (term expires 1955).
Dr. Carl Sebelius, director, dental hygiene service, State department of public health, Nashville, Tenn. (term expires 1954).

EX OFFICIO MEMBERS

Dr. Bion R. East, Assistant Chief Medical Director, Dental Service, Veterans' Administration, Washington 25, D. C.
Alternate for Vice Adm. Joel T. Boone, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington, D. C.
Col. Joseph L. Bernier, United States Army, Medical Corps, Armed Forces Institute of Pathology, Seventh Street and Independence Avenue SW., Washington 25, D. C.
Alternate for Dr. W. Randolph Lovelace II, chairman, Armed Forces Medical Policy Council, Office of the Secretary of Defense, Washington 25, D. C.
Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.

EXPLANATION OF CHANGE IN LANGUAGE

Mr. FOGARTY. What does this change in language mean, Doctor.

Mr. HARLOW. That language change, Mr. Chairman, is tied in with our request for $250,000 for project grants to States, and it is almost identical with similar language in the cancer appropriation, in which the cancer appropriation makes its special and other grant moneys available to the States.

Mr. FOGARTY. Do you have any further statement to make, Doctor?

Dr. FORSYTH. No, sir, Mr. Chairman.

Mr. FOGARTY. Thank you very much, Doctor.

We will stand recessed until 1:30.

FRIDAY, FEBRUARY 1, 1952.

RETIRED PAY OF COMMISSIONED OFFICERS

WITNESSES

DR. LEONARD A. SCHEELE, SURGEON GENERAL, PUBLIC HEALTH SERVICE
ROY L. HARLOW, CHIEF FINANCE OFFICER
HARRY L. DORAN, ASSISTANT CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

PAY, ETC., COMMISSIONED OFFICERS

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$1,790,000	$1,861,500	
Transferred to "Salaries and expenses, defense production activities, Federal Security Agency," pursuant to Public Law 253		−40,000	
Adjusted appropriation or estimate	1,790,000	1,821,500	
Reimbursements from other accounts	665,710	989,036	
Total available for obligation	2,455,710	2,810,536	
Unobligated balance, estimated savings	−61,646		
Obligations incurred	2,394,064	2,810,536	
Comparative transfer to—			
"Assistance to States, general, Public Health Service"	−342,294	−350,000	
"Salaries and expenses, Public Health Service"	−1,102,290	−1,412,536	
"Retired pay of commissioned officers, Public Health Service"	−949,480	−1,048,000	
Total obligations			

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$147,804	$56,722	$106,500
Obligations incurred during the year	2,394,064	2,810,536	
	2,541,868	2,867,258	106,500
Deduct:			
Reimbursable obligations	665,710	989,036	
Unliquidated obligations, end of year	56,722	106,500	6,500
Adjustment in obligations of prior years	5,540		
Obligated balance carried to certified claims account	19,393		
Total expenditures	1,794,503	1,771,722	100,000
Expenditures are distributed as follows:			
Out of current authorizations	1,671,621	1,715,000	
Out of prior authorizations	122,882	56,722	100,000

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Retired Pay of Commissioned Officers

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate (obligations incurred)			$1,250,000
Comparative transfer from "Commissioned officers, pay, and so forth, Public Health Service"	$949,480	$1,048,000	
Total obligations	949,480	1,048,000	1,250,000

Obligations by activities

Retired pay of commissioned officers:	
1951	$949,480
1952	1,048,000
1953	1,250,000

Obligations by objects

12 Pensions, annuities, and insurance claims:	
1951	$949,480
1952	1,048,000
1953	1,250,000

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Obligations incurred during the year			$1,250,000
Expenditures out of current authorizations			1,250,000

Mr. Fogarty. The committee will come to order.

We have for consideration "Retired pay of commissioned officers." Mr. Harlow, are you going to justify this request?

General Statement

Mr. Harlow. Yes, sir, Mr. Chairman.

In connection with this item, may I say that this is the first time we have presented to the committee a separate appropriation item for "Retired pay of commissioned officers, Public Health Service."

EXPLANATION OF CHANGE IN BUDGET STRUCTURE

Heretofore it has been carried in with other items in an appropriation that was called "Pay of commisisoned officers." As I told you on the first day of the hearings, we have taken out of the old appropriation all of the money that was for active duty pay and have distributed it to other appropriations. That leaves this item and we are asking that a separate no-year account be set up for that, which is the way retired pay is handled for civil service employees. They have a no-year account and any unexpended balance which may remain at the end of the year is thereby made available for the succeeding fiscal year and it is necessary only to add to that appropriation the amount which the unexpended balance at the end of the fiscal year is insufficient to carry the retirement costs for the succeeding year.

TYPES OF RETIREMENT BENEFITS

Our estimate on this item is based upon retirements contemplated during fiscal year 1953 less officers who may be dropped from the retired list. Commissioned officers of the Public Health Service are placed on the retired list for four different reasons. One, in the case of disability. Another, automatic retirement at the age of 64; another, optional retirement after 30 years of service; and fourth, failure to pass an examination if he has acquired a certain place in the Corps. In other words, if he has reached the full grade which is the equivalent in rank to a major in the Army.

They, by law, are entitled to receive 75 percent of their active duty pay on retirement with the exception of the officer who fails to pass an examination. That officer is entitled to receive retired pay based on 2½ percent of his active duty pay multiplied by the years of active service. There are some minor exceptions to these percentages.

Mr. DENTON. What is it, physical or mental examination?

Mr. HARLOW. They take a physical examination; a man could be retired for disability, if he was mentally incompetent as well. They are dropped from the retired list by death, of course, and there may be an occasional man dropped from the retired list for other causes. For example, if he is called to active duty or accepts a Government post where his pay with the Government is more than his retired pay. He is not dropped from the retired list but he ceases to receive his retired pay while he is employed by the Government.

If he accepts a Government position which pays him less than his retired pay, he only receives from us the difference between the regular Government pay and his retired pay.

ESTIMATED NUMBER AND COST OF RETIREMENTS IN 1953

We have, as of December 31, 1951, 210 officers on our retired list. By the end of this current fiscal year we figure we will have 231 on the list. This increase that you see here of $202,000 is to take care of 40 additional retirements during fiscal 1953.

BASIS USED TO DETERMINE NUMBER OF RETIREMENTS FOR 1953

Mr. FOGARTY. How is it you arrive at a figure of 40 as the increase for 1953? That seems to be quite a jump estimated for 1952 also. You are going from 202 to 271 in 2 years.

Mr. HARLOW. We have 31 officers right now who are eligible for retirement on the basis of 30 years' service. From contacts we have had with them we have reason to believe that a good many of these will take advantage of their option in that respect and then there will be three additional officers who will have attained their 30 years of service in 1953. In addition to that, of course, we have these other classes of retirements to allow for. Our recent experience, or experience for several years, has been that disability will take about 18. We know that there will be eight who will reach their retirement age.

Mr. FOGARTY. How many do you expect will die in 1953?

Mr. HARLOW. We have allowed for four.

Mr. FOGARTY. Out of 271?

Mr. HARLOW. Out of the total; yes, sir.

ALLOCATIONS MADE IN 1952 BY COMPARATIVE TRANSFER FROM PREVIOUS ACCOUNT

Mr. FOGARTY. Now, let me get this straight. In our committee print, at page 50, you have an item "Commissioned officers' pay, etc.," for which you received $1,861,500 for 1952. Now, from your explanation, I take it that $1,861,500 has been deleted from this appropriation but has been spread throughout the agency. Is that correct?

Mr. HARLOW. It has gone into three or four different places and I can tell you where that money has gone.

Mr. FOGARTY. All right.

Mr. HARLOW. $1,412,536 in salaries and expenses, Public Health Service; $1,048,000 to the retired pay item. That should total $2,810,536. That does include reimbursements, however.

Mr. FOGARTY. That does not check with these two figures I have in front of me, $1,861,500 for the 1952 item and $1,250,000 for the retired-pay item in 1953.

Mr. HARLOW. $1,048,000.

Mr. FOGARTY. On what item?

Mr. HARLOW. The retired pay; $350,000, assistance to States, and the balance to salaries and expenses, Public Health Service.

Mr. FOGARTY. How much to Salaries and expenses?

Mr. HARLOW. That should be $423,500.

Mr. FOGARTY. Does that come out to a total of $1,861,500?

Mr. HARLOW. Well, I guess we cannot arrive at it from the material we have immediately. But that is very close.

Mr. FOGARTY. All right. Will you get the exact figures for the record?

(The requested information follows:)

Commissioned officers, pay, etc., Public Health Service

Comparative transfer to:	
"Retired pay of commissioned officers"	$1,048,000
"Salaries and expenses"	423,500
"Assistance to States, general"	350,000
"Salaries and expenses, defense production activities"	40,000
Total	1,861,500

Mr. FOGARTY. Where does that $423,500 show up in "Salaries and expenses"?

Mr. HARLOW. It shows up in two items, Mr. Chairman, one in the item we referred to as general duty and one in the management and central services item.

ESTIMATED EXPENDITURES FOR RETIREMENT PAY IN 1952

Mr. DENTON. Of this amount, $1,048,000, how much of that has been expended this year for the pay of retired personnel? How much will be expended during the balance of the year?

Mr. HARLOW. These are our estimated total expenditures for the year 1952. Yes, sir.

Mr. DENTON. Of course, you have spent part of it?

Mr. HARLOW. Yes, sir.

Mr. DENTON. Is that sum sufficient to pay retired pay for personnel?

Mr. HARLOW. Yes, sir.

Mr. DENTON. I remember we had a much higher figure last year and that was cut on the floor of the House.

Mr. HARLOW. And we were able to take care of that cut by persuading some of the officers who were eligible for retirement by years of service, not to retire. Our estimate, when we appeared before you last year was $1,088,000 for retired pay.

Mr. FOGARTY. That was in the Senate?

Mr. HARLOW. The Senate. But when it came out of conference it was back to the House figure.

FACTORS CONTRIBUTING TO BUDGET INCREASE FOR RETIRED PAY

Mr. DENTON. Isn't this an unusually large jump you estimate for 1953?

Dr. SCHEELE. One of our problems in the service is, we do not have a steady accession of new personnel. So, people arriving at 30 years' service, or arriving at age 64, do not give a steady figure. There were times in depression years when we had no new personnel coming in and no new money to hire personnel. When the depression began to taper off and we got more money than we had in years before we let more go. If one goes back into that background you will see certain expansions in the service which were reflected in the larger number coming in.

Mr. DENTON. Many of these would be people hired in the twenties?

Mr. HARLOW. Yes. This is purely a mechanical figure in a sense. It is based on people eligible for retirement at 30 years and 64 years of age; and those who will get sick and will have to retire for physical disability.

AMOUNT REQUESTED FOR RETIREMENT PAY IN 1952

Mr. BUSBEY. Mr. Harlow, where was this item for 1952 of $1,048,000 carried last year?

Mr. HARLOW. It was carried in the appropriation for commissioned officers' pay, Public Health Service, which included both active-duty and retired pay.

Mr. BUSBEY. What page of the justification would that be?

Mr. HARLOW. In last year's justification, page 96. It would not appear in this year's justifications.

Mr. BUSBEY. No. I am not talking about this year's justifications. I was trying to find in the book of justifications where the item would come this year in order to see how much it has been decreased.

Mr. HARLOW. Well, in our last year's justifications, Mr. Busbey, we had an estimate of $1,900,000 of which $1,088,000 was for retired pay and the balance was active-duty pay.

Mr. BUSBEY. And that would be decreased this year by a comparable amount?

Mr. HARLOW. Yes, sir.

Mr. BUSBEY. I do not think I have anything else.

LANGUAGE CHANGES

Mr. HARLOW. Before you leave that item, may I deal with a matter of language? It is tied in with language that appeared in the 1952 appropriation and in connection with the pay of commissioned offi-

cers. If we are to get it this year it should be included in the committee print at page 53, line 14, which is the general opening paragraph of the Public Health Service.

You will notice we have dropped all the language in the commissioned officers appropriation except that relating to retired pay. There is one item on which the general counsel's office of the agency and the Bureau of the Budget have not come to complete agreement. It is this language:

And payment of claims for private property lost, destroyed, captured, abandoned, or damaged, as authorized by law.

The lawyers of FSA feel that we, perhaps, should have this language in our appropriation bill. The Budget Bureau lawyers say that we do not need language in order to pay these claims. We would feel better about it if we had it in.

Mr. FOGARTY. You want it in there.

Mr. SCHWABE. It is not shown in the committee print this year?

Mr. HARLOW. No.

Mr. DENTON. The general language applies to the Army and Navy and applies to the Public Health Service also.

Mr. HARLOW. The Budget Bureau think so and we think so but in order that there may be no doubt about it, our general counsel has indicated it would be better if we had it in the appropriation language.

Mr. FOGARTY. Have you had any claims presented that have not been paid?

Mr. DORAN. We had claims in the past 2 years and we had to request a change in language in a supplemental appropriation to have them paid. It delayed payment of the claims for several months. We did have to get additional authority at that time. The situation can be covered by inserting language after the semicolon on page 53, line 14 of the committee print, as follows:

and payment of claims for private property lost, destroyed, captured, abandoned, or damaged, as authorized by law.

Mr. FOGARTY. Are there any questions on that?

Mr. SCHWABE. No.

Mr. STEPHENS. If the word "hereafter" were put in there, it would not occur again. It would have to be brought up again if the Comptroller General ruled it was necessary or unnecessary. It would not have to be repeated.

Mr. FOGARTY. You have some new language on page 123. What is that?

Mr. HARLOW. That language, Mr. Chairman, authorizes certain transfers between appropriations available to the Public Health Service for the pay of commissioned officers. I mentioned that, I think, the first day of the hearing. The purpose of that language is to give us some flexibility in the assignment of commissioned officers without going through the process of doing all the paper work that is involved in switching from one appropriation to the other in pay matters.

It would do this also in case there was, shall we say, an emergency in some activity for which only one appropriation was available. If the funds in that appropriation were insufficient to meet this emergency we could supplement that appropriation to the extent that we assigned additional commissioned officers to that activity.

Mr. FOGARTY. Are there any questions on that language?

Mr. SCHWABE. Up to 5 percent?

Mr. HARLOW. Up to 5 percent. Yes, sir.

I do not know to what extent this type of authorization has been increased or decreased in other agencies. I do not know whether they still have it or not. The Department of Labor had it, only theirs was not tied in to any particular class or employee. It was a general authorization.

SALARIES AND EXPENSES, PUBLIC HEALTH SERVICE

WITNESSES

DR. LEONARD A. SCHEELE, SURGEON GENERAL, PUBLIC HEALTH SERVICE
ROY. L. HARLOW, CHIEF FINANCE OFFICER
HARRY L. DORAN, ASSISTANT CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Amounts available for obligation

	1951 actual	1952 estimate	1953 estimate
Appropriation or estimate	$2,868,000	$2,745,868	$3,310,000
Proposed supplemental due to pay increases		176,000	
Reimbursements from other accounts	43,012	228,254	1,318,228
Total available for obligation	2,911,012	3,150,122	4,628,228
Unobligated balance, estimated savings	−3,699		
Obligations incurred	2,907,313	3,150,122	4,628,228
Comparative transfer from—			
"Assistance to States, general, Public Health Service"	22,274	24,000	
"Hospitals and medical care, Public Health Service"	19,250	21,550	
"Commissioned officers, pay, and so forth, Public Health Service"	1,102,290	1,412,536	
Total obligations	4,051,127	4,608,208	4,628,228

Obligations by activities

Description	1951 actual	1952 estimate	1953 estimate
Direct Obligations			
1. Evaluation of public-health problems and methods	$455,190	$471,220	$461,300
2. Development and coordination of nursing resources	94,833	93,500	93,000
3. International health activities	131,074	140,200	139,000
4. General duty and training	293,053	275,078	265,000
5. Management and central services	2,368,255	2,410,920	2,351,700
Total direct obligations	3,342,405	3,390,918	3,310,000
Obligations Payable Out of Reimbursements From Other Accounts			
1. Evaluation of public-health problems and methods	5,332	8,418	8,590
3. International health activities	37,680	209,852	296,849
4. General duty and training	665,710	989,036	1,012,789
5. Management and central services		9,984	
Total obligations payable out of reimbursements from other accounts	708,722	1,217,290	1,318,228
Total obligations	4,051,127	4,608,208	4,628,228

Obligations by objects

Object Classification	1951 actual	1952 estimate	1953 estimate
Summary of Personal Services			
Total number of permanent positions	849	827	788
Full-time equivalent of all other positions	5	2	2
Average number of all employees	716	741	735
Average salaries and grades:			
General schedule grades:			
Average salary	$4,035	$4,589	$4,615
Average grade	GS–6.1	GS–6.5	GS–6.5
Crafts, protective, and custodial grades:			
Average salary	$2,360	$2,690	$2,694
Average grade	CPC–2.5	CPC–2.5	CPC–2.5
Personal service obligations:			
Permanent positions	$3,436,166	$4,078,950	$4,101,672
Part-time and temporary positions	33,883	10,000	10,000
Regular pay in excess of 52-week base		9,316	9,519
Payment above basic rates	22,217	21,848	22,943
Total personal service obligations	3,492,266	4,120,114	4,144,134
Direct Obligations			
01 Personal services	2,782,969	2,901,384	2,824,466
02 Travel	64,996	85,550	83,770
03 Transportation of things	3,537	3,618	3,618
04 Communication services	103,751	109,300	109,300
05 Rents and utility services	18,169	9,015	7,315
06 Printing and reproduction	142,427	132,400	132,400
07 Other contractual services	117,500	95,100	94,400
Services performed by other agencies	5,630	2,900	2,900
08 Supplies and materials	45,254	25,800	23,800
09 Equipment	58,483	27,800	27,800
13 Refunds, awards, and indemnities	286		
15 Taxes and assessments	1,203	1,851	1,851
Subtotal	3,344,205	3,392,718	3,311,800
Deduct charges for quarters and subsistence	1,800	1,800	1,800
Total direct obligations	3,342,405	3,390,918	3,310,000
Obligations Payable Out of Reimbursements From Other Accounts			
01 Personal services	709,297	1,218,730	1,319,668
02 Travel	1,106		
07 Other contractual services	209		
08 Supplies and materials	5		
Subtotal	710,617	1,218,730	1,319,668
Deduct charges for quarters and subsistence	1,895	1,440	1,440
Total obligations payable out of reimbursements from other accounts	708,722	1,217,290	1,318,228
Total obligations	4,051,127	4,608,208	4,628,228

Analysis of expenditures

	1951 actual	1952 estimate	1953 estimate
Unliquidated obligations, start of year	$503,848	$420,786	$382,214
Obligations incurred during the year	2,907,313	3,150,122	4,628,228
	3,411,161	3,570,908	5,010,442
Deduct:			
Reimbursable obligations	43,012	228,254	1,318,228
Unliquidated obligations, end of year	420,786	382,214	326,654
Adjustment in obligations of prior years	15,283		
Obligated balance carried to certified claims account	2,546		
Total expenditures	2,929,534	2,960,440	3,365,560
Expenditures are distributed as follows:			
Out of current authorizations	2,510,703	2,420,000	3,030,000
Out of prior authorizations	418,831	375,000	325,000
Out of anticipated 1952 supplemental for pay increases		165,440	10,560

Mr. FOGARTY. Mr. Harlow, are you going to justify the appropriation request for "Salaries and expenses"?

GENERAL STATEMENT

Mr. HARLOW. Mr. Chairman, I would like to begin that matter if I may. In the Public Health Service, in accordance with the provision of the Public Health Service Act, there are four bureaus. Up to now you have been hearing of the activities of the three principal program bureaus of the Public Health Service: 1. The Bureau of State Services; 2. The Bureau of Medical Services; 3. The National Institutes of Health.

We have left then, the Office of the Surgeon General which, under the law is designated as a bureau. In this appropriation are all the activities carried on in the Surgeon General's office and one, with respect to nursing resources which, although part of the Bureau of Medical Services, historically has been carried in this item, probably because there is no appropriation that we would have under the Bureau of Medical Services that is particularly appropriate for this small item on nursing resources.

The Surgeon General's office by and large is not a program conducting bureau. However, we do have here three items which fall in the class of programs. First, the evaluation of public health problems and methods; second, the program of nursing resources; and third, international health activities.

VALUE OF ADMINISTRATIVE MANAGEMENT TO ORGANIZATION

By far the bulk of this money, approximately two-thirds or three quarters of it, is for these activities which are directly related to the operation of the Surgeon General's office. Since they do not fall within that category of what might come under the general term, "Administrative expenses," I would like to express a philosophy about that matter which I have formed and hope that you will agree with it.

I have gotten the idea from some of the statements that appear in newspapers and sometimes that appear in the Congressional Record that administrative people in general are generally considered to be leeches upon the body politic. I have got the idea that some people believe that to be a fact. I have been in administrative work all my working life and most of that time has been spent with the Public Health Service.

I am particularly proud of my associations with the Public Health Service because I am particularly proud of the organization itself. I think that we administrative people have contributed a great deal to the reputation which the Public Health Service has.

By and large our public-health programs are conducted by doctors, dentists, scientists, sanitary engineers, professional nurses, and professional people in general. However, these professional people very much need the supporting services that administrative people give them.

You would not, for example, want to see a scientist building rat cages. You would not want to see an engineer firing a boiler. You would not want to see a doctor changing sheets in a hospital bed, or a dentist making up a bit of tooth paste to give to one of his patients.

All of these people need supporting services and it is this supporting service that we people in administration attempt to give to the professional people. It is just like a man and his secretary. You do not figure that out of that team you get only the money you invest in the principal. You count the cost of the two put together and say that out of the combined total cost that you put into that unit you get much greater result than out of the man himself.

So, I wanted to put in a plea, if I could, for sympathetic consideration for the administrative people.

This item is not composed entirely of administrative people. The Surgeon General himself is carried here and the Deputy Surgeon General and those professional men he has found it necessary to gather around him in order to carry on his duties.

We have had what I venture to say is a little bit of harsh treatment of administrative people at the hands of some people, perhaps.

Now, there is another specific thing I wanted to mention in connection with this. You people were kind enough to exempt the Public Health Service from certain personnel ratios which were applied by legislation to almost all of the executive agencies. You asked us, or stated I believe, on the floor or in one of the reports that you would look to the Surgeon General to pursue that subject vigorously and see if we could not do something about it.

POSITION REDUCTION IN MANAGEMENT AND CENTRAL SERVICES

Under this item, "Management and central services," you will notice that our positions between 1952 and 1953 are reduced by 46. That is almost entirely in the personnel field and I think goes a long way, Mr. Chairman, toward meeting your desires. In fact, I think we have done all we could to satisfy you and we hope you will be satisfied.

Mr. FOGARTY. Mr. Harlow, you have given a pretty good speech and I think I can agree with a lot of what you have said. I think you have found this committee in the past, at least in the past 6 years, has treated the Public Health Service very well. By and large the committee has felt you people have been honest when you have come up here and, as long as you remain honest and above board, I think you can expect fair treatment from this committee or any other committee.

It is when someone comes up here and tries to cover up something and does not give us the truth about things that we have to get tough and if we didn't they would be brought up on the floor. When they are we have no defense at all and we would not want to defend them. That has happened in many instances and that is why I would like to see members of this committee bring up the doubtful projects before we get to the floor and straighten them out here.

RATIO OF PERSONNEL

As regards this ratio of personnel employees, that was not the action of this committee a year ago. That action was taken in the Senate and this committee was able to get the Public Health Service exempted in 1952. We did write in the report that you should come back with some definite recommendations this year and lower your ratio of personnel employees which you apparently have by your statement today.

Mr. HARLOW. Thank you, Mr. Chairman.

Mr. FOGARTY. The Public Health Service has been doing a good job and they are fairly honest when they come before us. As long as they remain that way and tell us the truth and are above board they will be dealt fairly with by the committee. It is only when they try to cover up something that it is held against them.

Mr. HARLOW. I thank you for those words, Mr. Chairman, and so far as I am concerned, and I know I speak for the Surgeon General, we do not attempt, and never have attempted, to tell other than the truth when we appear before you.

Mr. FOGARTY. But maybe you do not know everything that goes on in your higher echelon.

Dr. SCHEELE. May I speak off the record, Mr. Chairman?

(Discussion off the record.)

Mr. FOGARTY. On the record.

Would you explain each of these items of change? Start at the top and go right through the list.

EXPLANATION OF BUDGET ESTIMATES

Mr. HARLOW. On page 195, Mr. Chairman, there are reductions all the way down the list.

Mr. FOGARTY. Will you take each item and tell us what you had in 1952, what you expect in 1953, and give us a brief explanation of it.

Mr. HARLOW. In the evaluation of public-health problems and methods the total requested——

ADJUSTMENT OF FUNDS BY COMPARATIVE TRANSFER IN 1952

Mr. FOGARTY. First, why don't you start with this $24,000 reduction at the top of the page?

Mr. HARLOW. Mr. Chairman, in 1952, the total appropriation under this title is $2,745,868. We show transfers into this appropriation as follows: From "Assistance to States, general," $24,000; "Hospitals and medical care," $21,550. These two items could be considered together, Mr. Chairman, because they do represent personnel positions which we have transferred from these two appropriations and have consolidated that work in this appropriation and have gone on from there and reduced our total number of positions. We just added these 10 in so we would have all the personnel work together. We went through with the reductions in force and got rid, not only of these 10, but about 20 more. We reduced from 90 to 60.

The other item transferred into this appropriation is $423,500 which is the active duty pay of some of the Regular commissioned officers who were heretofore carried in the appropriation from which this amount is shown to have been transferred. These were the officers on general duty assignments and those in the Surgeon General's and Deputy Surgeon General's and other offices which are on his immediate staff.

SUPPLEMENTAL APPROPRIATION REQUEST AND ESTIMATED COST OF PAY ACT IN 1952

Then we have a proposed supplemental for the cost of the Civil Service Pay Act in 1952 of $176,000.

Mr. FOGARTY. What was your anticipated cost in 1952?

Mr. HARLOW. $204,000 is what it will actually cost us.

Mr. FOGARTY. So you are absorbing $28,000?

Mr. HARLOW. Yes, sir. That gives us a total comparable availability of $3,390,918.

Mr. FOGARTY. Now, all these transfers will be included in next year's budget. They won't be transfers?

Mr. HARLOW. No, sir. You will not see this again. The estimate for 1953 is $3,310,000, a net reduction of $80,918. These reductions appear in larger or smaller amounts in every activity which is financed from this appropriation—$9,920 in the item of "Evaluation of public health problems and methods"; $500 in the "Development and coordination of nursing resources"; $1,200 in "International health activities."

POSITIONS CARRIED ON REIMBURSABLE BASIS

Mr. FOGARTY. On that item how do you show a decrease of $1,200 when you are adding 10 positions?

Mr. HARLOW. These are reimbursable positions. We will get reimbursed for these positions, if I am not mistaken.

Mr. FOGARTY. You mean you are going to have 10 positions in the Office of the Surgeon General paid out of other funds?

Mr. HARLOW. Yes, sir. The State Department and Technical Cooperation Authority.

Mr. FOGARTY. Well, who justifies these positions? Do these various agencies when they appear before the proper committee?

Mr. HARLOW. Yes, sir. They justify the money for them. In a little booklet we gave you a day or two ago, on the back cover sheet of it you will see the foreign activities and a list of the foreign countries in which we have people.

BREAKDOWN OF POSITION COMPLEMENT FOR INTERNATIONAL HEALTH ACTIVITIES

Mr. FOGARTY. I guess you had better provide for the record a breakdown of the 55 positions you have on international health activities and that are being paid out of this appropriation, what they are doing and where they are. Then list the 10 additional positions, who is paying for them and what they are doing.

Mr. HARLOW. We are not paying for all the 55. The bulk of these are reimbursable, Mr. Chairman.

Mr. FOGARTY. How many are you paying for?

Mr. HARLOW. Twenty-five.

Mr. FOGARTY. Will you give us a breakdown of the 25 that are being paid out of your appropriation, where they are and what they are doing; also the other 30 reimbursable positions in that category for 1952 and the 10 additional ones you are asking for 1953.

Mr. HARLOW. We will do so, sir.

(Statement referred to follows:)

Division of International Health

The 65 positions included in the estimate for fiscal year 1953 under the project "International health activities" are comprised of 40 positions paid from funds reimbursed by other agencies and 25 paid from this appropriation. The 25 positions paid from direct appropriation, all headquarters staff in Washington, D. C., are as follows:

Position title	Number positions	Grade
Civilians:		
Assistant chief	1	GS-15.
Public-health program specialist	2	GS-14.
Administrative officer	1	GS-11.
Public-health-program specialist	1	GS-11.
Organization and methods examiner	1	GS-9.
Financial management assistant	1	GS-7.
Secretary to chief	1	GS-6.
Secretary to assistant chief	1	GS-5.
Secretary to international representative	1	GS-5.
Mail and files supervisor	1	GS-5.
Clerk-stenographer	5	GS-4.
Clerk-typist	3	GS-3.
Mail and file clerk	1	GS-2.
Commissioned officers:		
Chief of Division	1	Director.
Chief, program development branch	1	Do.
Chief, health services branch	1	Senior.
Chief sanitary engineer	1	Do.
Chief nurse	1	Do.
Total	25	

The incumbents in these positions provide staff services to official United States representatives to international health meetings and organizations; plan, staff, and supervise health programs in 14 countries, excluding Latin America; administer training programs for foreign health personnel; maintain liaison with other agencies concerned with international health programs to insure coordination of programs and to prevent duplication of expenditures.

The reimbursable positions requested in the respective years are:

	1952	1953
Commissioned officers:		
Director grade	10	15
Senior grade	15	18
Full grade	5	7
Total	30	40

Of the 30 positions for 1952, 25 were requested by Institute of Inter-American Affairs, of which 8 are now on duty. The incumbents in these positions assist in the direction of public-health programs, give technical advice in the field of their specialized competence and instruct the professional and subprofessional public-health workers in the countries to which they are assigned. It is anticipated that the 17 positions presently vacant will be filled before the end of this fiscal year. Ten additional positions have been requested for fiscal year 1953. The duties and responsibilities of these positions will be the same as those requested for fiscal year 1952.

Five reimbursable positions were estimated to fill the needs of other agencies of which three are currently filled; one is assigned to the Department of State for service in their science staff at the London Embassy; one is assigned to the Department of Commerce to head the medical public-health portion of the road-building project in Ethiopia; and one is assigned to the Department of Labor as consultant on an industrial team to the country of India. The two vacant positions are contingent upon the requirements of the requesting agencies.

BREAKDOWN OF POSITION COMPLEMENT FOR GENERAL DUTY AND TRAINING

Mr. HARLOW. Then in the general duty and training program, and these also include reimbursable positions filled in 1952 and 1953, we will have a reduction of $10,078 and drop one position.

Mr. FOGARTY. How many positions then do you have in the office that you are paying for?

Mr. HARLOW. Thirty.

Mr. FOGARTY. Will you give us a breakdown for the record of all those 30 and what they are doing, and the other 121, who is paying for them and what they are doing?

Mr. HARLOW. Yes, sir.

(Statement referred to is as follows:)

POSITIONS INCLUDED IN GENERAL DUTY AND TRAINING

Direct obligations

Assistant surgeon general	4
Director grade	7
Senior grade	10
Full grade	8
Senior assistant grade	1
Total	30

These positions include the chief dental officer of the Service, the chief sanitary engineering officer of the Service, the chief nurse officer of the Service, the chief medical officer of the United States Coast Guard, training assignments in highly specialized fields which are of general interest to the Public Health Service, and special temporary and emergency assignments.

Reimbursements

Department of Commerce:	
Coast and Geodetic Survey: Medical service on board ships of the Coast and Geodetic Survey	1
Maritime Training Fund: Medical services to cadets at the Merchant Marine Academy	3
Department of Labor, Bureau of Employees Compensation: Medical advisers on Bureau of Employees compensation claims	4
Department of the Interior, Bureau of Indian Affairs: Preventive medicine, public health, and medical care to beneficiaries of the Bureau of Indian Affairs	11
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Point IV program: Direction of public health programs, technical advice, instruction of professional and subprofessional public-health workers in the countries to which they are assigned	7
International Commission: Technical services on problems relating to air- and water-pollution control	2
Federal Civil Defense Administration: Advice on medical and public health matters	5
Defense Production Administration: Technical consultation to the Defense Production Administration in connection with the role of the Public Health Service as claimant for hospital and health facilities	1
Displaced Persons Commission: Liquidating program which provided for medical examinations of those applying for entrance into the United States under the Displaced Persons Act	1
Office of Defense Mobilization: Technical advice on public health, preventive medicine, and medical manpower	1
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Federal Security Agency: All regular corps officers must be paid from Public Health Service appropriations. Therefore, officers rendering services elsewhere in the Agency—Children's Bureau, Office of Vocational Rehabilitation, etc., are detailed to such offices on a reimbursable basis	7

Mr. HARLOW. In "Management and central services" we are making a reduction of $59,220 and dropping 46 positions. The reason the amount of money dropped is not more is that these reductions were actually made early in the year 1952 and the actual drop in the payroll occurred largely in the year 1952.

BREAKDOWN OF POSITIONS ABOLISHED IN MANAGEMENT AND CENTRAL SERVICES

Mr. FOGARTY. Will you supply a breakdown of those 46 positions for the record?

(Statement referred to is as follows:)

Positions dropped in management and central services

Division of Commissioned Officers	21
Division of Finance	5
Division of Management Services	3
Division of Personnel	17
Total	46

TOTAL DIRECT OBLIGATIONS, 1952–53

Mr. FOGARTY. What is this next "Total direct obligations"? What does that mean?

Mr. HARLOW. That is the sum of the items which appear above it to correspond to the comparable availability in 1952.

Mr. FOGARTY. That includes all the transfers?

Mr. HARLOW. Yes, sir.

Mr. FOGARTY. So in 1952 you actually will have $3,390,918 not counting reimbursements but including transfers, and you are estimating $3,310,000 as your requirements in 1953?

Mr. HARLOW. Yes, sir.

Mr. FOGARTY. A reduction of 39 positions and $80,000.

Mr. HARLOW. Yes, sir.

Mr. DENTON. I want to congratulate you on making a very excellent statement, Mr. Harlow.

Mr. HARLOW. Thank you.

COST OF PAY INCREASE NOT APPLICABLE TO COMMISSIONED OFFICERS

Mr. DENTON. The pay increase does not apply to the commissioned officers of the Public Health Service?

Mr. HARLOW. No, sir. There is one that passed the House that applied to commissioned officers that gave them 10 percent.

Mr. DENTON. That would apply to commissioned officers?

Mr. HARLOW. Yes.

Mr. DENTON. You do not have that in this budget? That will be in a separate request?

Mr. HARLOW. That is right, sir.

Mr. SCHWABE. I do not think I have any questions to ask Mr. Harlow. I think, on the whole, not only Mr. Harlow but all of them have been very cooperative. It is always a pleasure to have the Public Health Service before the committee. I am sure it is to me. I appreciate their willingness, apparently, to elucidate for us in order

that it may be a further elucidation to the whole Congress. We appreciate their desire to take us into their confidence and be assured that we are only occupying the trust position, somewhat analogous to theirs so far as the public is concerned, and we must always have in mind the interest of the public as a whole as well as the Service when we sit here to endeavor to understand the presentations and in order that we may interpret them ourselves.

FURTHER EXPLANATION OF BUDGET ESTIMATE FOR INTERNATIONAL HEALTH ACTIVITIES

Mr. BUSBEY. Mr. Harlow, I am not quite clear on this item 3, "International health activities," where you ask for an increase of 10 positions but the decrease in the appropriation is $1,200. Will you explain that?

Mr. HARLOW. Under this set-up the way the budget is presented to you we are required to list every position whether we pay for it or not. So, the number of positions set opposite the money does not necessarily mean that all these people are paid from that particular fund. So, we know that the other agencies of Government dealing with international affairs and using health as a political and economic weapon are going to ask us for 10 additional people in 1953 so we put them in here to show that our total strength is going to increase by that number, but at the same time we did not ask for an increase in appropriation because they will pay us for them.

Mr. BUSBEY. Who is asking for these 10 additional increase of positions?

Mr. HARLOW. I do not have the detail on that at the moment. Would it be sufficient to put that in?

Mr. BUSBEY. I would appreciate it if you would.

(Statement referred to is as follows:)

The 10 additional positions in 1953 are for the Institute of Inter-American affairs.

REIMBURSEMENT FROM GOVERNMENT AGENCIES

Mr. BUSBEY. Now, are a portion of these people—that is, the 30 for fiscal 1952 and the 10 additional for 1953—paid in part or wholly out of the United Nations fund?

Mr. HARLOW. Not from the United Nations. No, sir. They are from Government agencies.

Mr. BUSBEY. What agencies other than the State Department?

Mr. HARLOW. They would be the technical assistance program under the Economic Cooperation Authority and the State Department. These are the two principal ones. I believe there is also one for the Mutual Security Administration.

Mr. BUSBEY. We get a change in that program every year. It was UNRRA, then something else, then ECA, and now Mutual Security Administration. Next year it will maybe come under technical assistance. They have a new name for it every year.

Mr. HARLOW. I am sure you can follow it better than I can.

Mr. BUSBEY. That is what I am trying to do here. And, Mr. Chairman, I would like to have the agencies listed and the amounts they embrace and the number of positions in these international health activities.

Mr. FOGARTY. I have asked for that with all positions where they get reimbursement. We are asking who is paying for them and what they are doing.

Mr. BUSBEY. That is all.

Mr. FOGARTY. Have you any further statement?

Mr. HARLOW. Except on behalf of the Public Health Service, since I am the last witness, to thank you for the time you have devoted to our programs and for the consideration you have given all of us as we have appeared before you.

Mr. FOGARTY. Do you have any further statement, Dr. Scheele?

Dr. SCHEELE. No, sir. I, too, want to thank the committee for your kind consideration of our statements during this 1953 appropriation hearing.

Mr. FOGARTY. Thank you very much.

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